

Supporting and Fostering Collaboration within a Community of Practice  
Around the Pedagogy of Arts Integration

by

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## ABSTRACT

Drawing on a wide variety of literature from social constructionism, communities of practice and knowledge management this study brings to light the kind of support teachers will need in order to be able to use a knowledge construction model to develop a continual learning process for arts integration. Arts integration is a highly effective instructional strategy that brings active engagement, problem solving and higher levels of cognition to students. However arts integration is not easy work. It takes a great deal of planning and collaboration.

In this action research study, I take the perspective of a social artist, a facilitator, who offers a framework for a group of teacher participants to dialogue, collaborate and share ideas and skills to develop arts integrated products to share with others. Utilizing a mixed methodology approach, the findings of this action research study revealed that the intervention had a positive impact on the participants. Though there were some set backs, participants reported more dialogue and shared experiences about arts integration on a daily basis, more dialogue about new arts integrate ideas, and an increased sense of collaboration in developing arts integrated products. Furthermore, the Knowledge Construction Model (KCM) concept had strength as a potential professional development model for teachers and schools interested in growing their arts integration practices.

## DEDICATION

I dedicate this dissertation to my family and friends, especially...

-to my wife, Tami, for her understanding, love and care and for putting up with my late nights, keyboard clacking and the desk light on... not sure how you will ever sleep again.

-to my parents, Bob and Judy, who instilled in me an unshakable midwestern work ethic and for supporting me making tree forts in the woods and jumping my bike off of plywood ramps.

-to the *stinkin' thinkers* of Ironwood High School.

-to the teachers, coaches and mentors who never gave up on me.

-to the educators for whom this work matters.

-to the arts educators that make education better every day.

-and most importantly, to my children Dylan, Caleigh and Emily who will forever have to live with the burden of their father. Just know it is all for the good. To whom I encourage creativity, strong character, passion and the courage to chase your dreams. I love you!

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Finally, I would like to acknowledge my comrades in Cohort 3. The number 3 should be a reminder of *delta* or *change*. Dedicate, in the future, the time for many more changes to come. The system needs us. Forget the new letters before and after your name and embrace the responsibility to this enterprise we call compulsory education. Make it better for your children and their children! I wish you all the best.

## TABLE OF CONTENTS

	Page
LIST OF TABLES.....	viii
CHAPTER	
1 INTRODUCTION .....	1
Theoretical Perspective .....	2
Arts Integration .....	4
Local Context .....	6
Statement of the Problem .....	7
2 LITERATURE REVIEW .....	9
Intervention .....	13
Quadrant 1- Externalization to Appropriation .....	13
Quadrant 2 – Combination to Transformation .....	14
Quadrant 3 – Internalization to Publication .....	15
Quadrant 4 – Socialization to Conventionalization .....	16
3 METHODS .....	17
Role of the Researcher .....	17
Participants .....	18
Data Measures .....	19
Professional Development Survey .....	19
Pre-Post Survey .....	20
On-line Conversations .....	20
Informal Interviews .....	20

	Page
CHAPTER	
Semi Structured Interviews .....	22
Focus group Interview .....	23
Follow-up Survey .....	24
Data Analysis .....	24
Quantitative Data .....	24
On-Line Conversations .....	27
Qualitative Data .....	27
Triangulation .....	28
4 RESULTS .....	30
Participants Perspectives .....	30
Professional Development Survey .....	30
Knowledge Construction Model .....	32
Externalization to Appropriation .....	32
Combination to Transformation .....	39
Internalization to Publication .....	44
Socialization to Conventionalization .....	51
5 FINDINGS .....	58
6 CONCLUSIONS .....	62
REFERENCES .....	64

## APPENDIX

A NON-OBJECTIVE SCULPTURE .....	76
B REPRESENTATION OF A COMMUNITY OF PRACTICE .....	78
C SECI MODEL .....	80
D BA SPACE .....	82
E VYGOTSKY SPACE .....	84
F KNOWLEDGE CONSTRUCTION MODEL (KCM) .....	86
G INTERVENTION BY QUADRANT.....	88
H TWELVE FORMS OF ELECTRONIC LEARNING MENTORING AND ASSISTANCE .....	90
I FOLLOW UP SURVEY QUESTIONS .....	93
J ON-LINE SURVEY SOCIAL NETWORKING .....	95
K PROFESSIONAL DEVELOPMENT SURVEY QUESTIONS .....	97
L PRE-POST SURVEY .....	99
M SEMI STRUCTURED INTERVIEW QUESTIONS .....	100
N FOCUS GROUP INTERVIEW QUESTIONS .....	103
O STUDENT SAMPLE ART WORK ART AND SCIENCE INTEGRATION .....	105
P IRB APPROVAL.....	107

## LIST OF TABLES

TABLE	Page
1. Professional Development Reliability Coefficient.....	24
2. Pre- Post Survey Reliability Coefficient .....	25
3. Professional Development Survey .....	27



## Chapter 1 - Introduction

Humans are distinct in their desire to study things that they cannot see or touch. Space is one of those phenomena. Space is the boundless, three-dimensional area in which objects and events occur and have relative position and direction (Space, 2009). But when space is not occupied by an object or event, it is referred to as a void or vacuum.

Artist John Henry occupied a void by placing a non-objective sculpture in an outdoor space (see Appendix A). As a non-objectivist sculptor, Henry constructed compositions by stacking, layering, adding and subtracting, and connecting pieces of material, creating both positive and negative space in a fashion that has direction and impact. The positive spaces are the physical pieces or sculpture as a whole. The negative spaces around the sculpture are a reflection of the actions in which the pieces were created. Negative spaces carry no physical property; they are often articulated as invisible and ever-changing. But negative spaces are not “empty” as one would think – they are important elements that allow objects to exist.

As an art student I prescribed to the idea that creating a three dimensional form was not necessarily about creating interesting positive space - the tangible sculpture - rather it was about creating interesting negative space. My dreams of being a high caliber artist like John Henry have passed; now that instead of through sculptures, I am attempting to craft other types of “invisible” spaces - collaborative learning spaces via social artistry.

Social artistry is the art of enhancing human capacities in the light of social complexity (Houston, 2007). Those who can craft and utilize learning spaces and facilitate capacity building have been called *social artists* (Wenger, 2009). Social artists promote *learning citizenship* (Wenger, 2009) and are people who use their own *citizenship* to open and create spaces where people can find their own sense of *learning citizenship* and creativity (Wenger, 2009). *Learning citizenship* is not much different than the word *citizenship* in that it refers to the active participation in affairs (like arts integration) for the good of a wider community. And because change and growth in communities rarely happens in a vacuum, social artists facilitate interaction (sharing, reflecting, and learning) in which intellectual space is both desired and dually created.

A social artist, like a sculptor, is then challenged to make use of space in the most efficient ways in order to help people construct, among many things, understandings and information. In a collaborative space, personal tacit knowledge is solidified (through journaling for example) and shared between people, organized or negotiated, and then finally reified into information as an explicit product or object (Wenger, 1998).

### **Theoretical Perspective**

Lave and Wenger (1991) describe the attainment of membership of individuals into a community of practice through a theoretical description called *Legitimate Peripheral Participation* (LPP). LPP describes the *newcomers* to a community and their levels of participation to become full time practitioners. Peripherality involves the concept of individuals in varied levels of participation

within a community of practice (CoP), perhaps with goals of an inbound trajectory towards full participation (Wenger, 1998) (See Appendix B for my representation of a CoP). This personal inbound trajectory is opened by means of each member sharing a sense of mutual engagement (collaborative relationships engaging toward group flow or coherence), joint enterprise (a shared understanding of goals) and a shared repertoire (the history, artifacts, objects and tools created by the community) with other community members (Wenger, 1998). These personal trajectories towards full participation, seemingly, create a sense of coherence; a sense of togetherness, relationship and identity through participation and reification.

In later iterations of CoP writings, Wenger (1998) takes an in-depth focus on the important aspect of *participation*. For Wenger (1998) learning is about social participation, that is, a process in which people negotiate meanings or more specifically engage and encounter their world in continual interaction, give-and-take, and gradual achievement (p.53). Negotiated meanings are a product of a duality of processes: participation (social interactions with others) and reification (making something abstract or conceptual into an object) (Wenger, 1998; Hildreth & Kimble, 2002; Bettoni, Andenmatten & Mathieu, 2007). Participation may generally refer to the discourse (verbal or textual communication) that individuals engage in with other individuals in their social world. These discourses are building blocks for individuals to learn or to construct understandings within a CoP.

Social participation and negotiating meaning have foundations in social learning and in the theoretical sense, with *constructivism*. For almost a century the concept of social learning/constructivism has been developed and built upon by educational philosophers like John Dewey, Joan Piaget, Lev Vygotsky and later, Jerome Bruner, who collectively posited that learners gain knowledge actively and construct knowledge based on their past experiences (Huang, 2002). For the most part, constructivist learning (a cognitivist approach) has focused on the internal/psychological factors where knowledge is representational and is situated in the mind of the individual (Phillips, 1995). However, *Constructionism* or more specifically *Social Constructionism* moves slightly away from constructivist principles and instills the ideas that learning is about the way knowledge is constructed by, for, and between members of a discursively mediated community (Hruby, 2001). Seymour Papert (1991) claims that learning occurs most appropriately when individuals *construct* a public artifact; the discourse of community members to make these public artifacts frames individual learning in an external/social context.

### **Arts Integration**

Arts integration, which is at the heart of this study, is an innovative practice and is the purpose for my intervention. The word *integration* may refer to *combination*, or the concept that parts have the potential to work together well. In that respect, arts integration, like many teaching innovations, is not fostered or developed in isolation or without direction or vision. Collaboration and learning

between a community of teachers, arts educators, and teaching artist/arts organizations is a key ingredient to arts integration success (Strand, 2006).

In addition, how others define *arts integration* has evolved over the past 15 years as many stakeholders (art educators, arts organizations, and arts councils) have experimented with the concept (Burnaford, Brown, Doherty & McLaughlin, 2007). Arts integration is not *arts education*. Arts, in an *educational* sense, revolve around teaching the arts, typically in a studio mindset, by a certified arts education specialist. Arts, in an *interdisciplinary* sense, is carried out by a classroom or arts teacher who attempts to bridge disciplines as a means to strengthen curricular connections of their own specific curricular area (Suraco, 2006). Arts, in an *integration* sense, unites concepts and parallel skills (Smilan & Miraglia, 2009) in curricular areas and supports simultaneous teaching and learning focused on experiences in art and other subjects (Smilan, 2004). The John F. Kennedy Center for Performing Arts (2008) defines arts integration as:

Arts integration is an approach to teaching in which students construct and demonstrate their understanding through an art form. Students engage in a creative process which connects an art form and another subject area and meets evolving objectives in both (p. 3).

The pedagogical application of arts integration is complex; it often involves co-planning and co-teaching and involves the collaboration of classroom teachers with arts educators and/or teaching artists as a means of articulating standards and curriculum goals (Smilan & Miraglia, 2009). Arts integration is a teaching tool, in most cases utilized by classroom teachers as a means to deliver

classroom content (math, language, science, etc.) to students in more meaningful and engaging ways.

### **Local Context**

The Peoria Unified School District (PUSD) is the third largest school district in the state of Arizona with approximately 38,000 students. It is located in the northwest portion of the greater Phoenix metropolitan area. PUSD has 39 schools which include seven high schools (9<sup>th</sup> -12<sup>th</sup>), thirty-one elementary schools (K-8<sup>th</sup>), and one transition center for high school students. The district describes itself as a “Signature District” that boasts high Arizona Instrument to Measure Standards (AIMS) test scores, excelling schools, the International Baccalaureate Program, championship sports programs, gifted programs, and specialized programs for academics, fine arts, and career and technical education (Peoria Unified School District, n.d.). During the 2008-09 school year, 70% of all PUSD schools were classified as either “Excelling” or “Highly Performing” on Arizona Department of Education’s AZ LEARNS profile (Arizona Department of Education, 2010).

In 2003, the PUSD Arts Education Department joined in a partnership with Arizona State University’s (ASU) Public Events and the John F. Kennedy Center for Performing Arts through its Partners in Education Program. Partnerships consist of arts organizations (in this case, ASU Public Events) and a district level administrator of a local school district (Director of Arts Education in PUSD). Of the thirty-one elementary schools, two have adopted an arts integrated model; one of the schools is the focus of this study.

School A has a population of approximately 800 students and is classified as a “Performing Plus” (Arizona Department of Education, 2010) school as designated by the Arizona Department of Education. School A is also a Title I school and operates as such in a school wide manor. School A started their arts integration program in 2009. School A, like all other school in the district, has a school-wide arts program which provides art and music as well as band and choir for 5<sup>th</sup> through 8<sup>th</sup> grade students. However, School A houses the district’s magnet program for the arts which offers unique opportunities for students in the 5<sup>th</sup> through 8<sup>th</sup> grades in dance, theater, and visual arts.

School A supports arts integration via integration coaches; three arts educators (dance, theater, visual art). Yet the potential level of effective teacher learning across this school campus, regarding arts integration, has yet to be explored.

### **Statement of the Problem**

In the Peoria Unified School District, arts integration is taught as an instructional strategy through professional development via John F. Kennedy Center teaching artists. A teaching artist is a practicing artist with the skills of an educator, who engages people in learning experiences in the arts (Association of Teaching Artists, n.d.). The Kennedy Center teaching artists work with a school and selected teachers in a three to five day residency. The teaching artists demonstrate to the classroom teachers how to engage students in arts related activities that help students accomplish objectives in the core content. However,

though the professional development is well-designed, the overall time teachers spend with the teaching artist is minimal.

As a result, the focus school in this study has created *Arts Integration Mentors* (AIM) (D. Brozka, personal communication, February 18<sup>th</sup>, 2010). AIM teachers are classroom teachers or arts specialists who, in some capacity, keep the learning of arts integration in motion in the absence of a Kennedy Center teaching artist. However, classroom teachers (including the AIM teachers) are often isolated from their peers as their school day is spent teaching children in what might be considered “boxes” (Burmeister & Hensley, 2004) in which knowledge sharing with colleagues is difficult.

Sarsar (2008) states that professional development for educators is often a process “done to teachers” not “with them” (p. 3). In addition, school accountability measures have had an impact on various aspects of a teacher’s ability to grow professionally, especially in the area of self determination (the ability for a teacher to choose professional development) and individualization (the ability to grow within a relevant context, like arts integration) (Smith & Kritsonis, 2006). If schools desire to move away from a “top-down” and controlled teacher learning environment, only heightened by current accountability measures, then schools must convert into transformative learning organizations (Schlechty, 2009; Friehs, 2003). As such, the need for effective teaching practices coupled with collaborative and creative learning space is imperative for this transformation (Zederayko & Ward, 1999; Inos & Quigley, 1995).



## Chapter 2 - Literature Review

In 2006, researchers Guarino, Santibanez and Daley analyzed federal *Schools and Staffing Surveys* of new teachers, and in 2007 researcher Ken Futernick examined over 2000 California veteran teacher surveys. Both found that teachers felt greater personal satisfaction and a higher sense of self efficacy in their work when they were actively supported to share and collaborate with other teachers. These researchers also asserted that this characteristic was one of many leading to higher rates of teacher retention. Despite the growing awareness of the benefits of collaboration and engagement, the accessibility of teacher knowledge is still limited, however, because most knowledge resides in the heads of people (Riege, 2005; Brown & Duguid, 1998). Finding ways to tap into teacher knowledge is perhaps one of the biggest tasks for educational leaders who value teachers for the wealth of knowledge they might bring to a variety of school reform issues.

Heider (2005) also studied teacher retention, but in this case, through a lack of collaborative connections due to teacher isolation. The notion of teacher isolation is not a new concept (Lortie, 1975). Over time, the notion of *classroom* has been develop into metaphors such as an “egg crate” (Cookson, 2005) a “box” (Burmeister & Hensley, 2004) and even a prison cell (Schlectley, 2009). These seemingly isolated places are where teachers spend most of their time working with students and have very little time to dialogue with colleagues or peers about their professional practices (Hadar & Brody, 2010). In order for arts integration to

grow for both the individual teacher and for the school system (as both are related in this study), these barriers of isolation must be removed.

The moving of the barrier, per say, is not so much a function of policy, but one of disruptive practices (Schlectley, 2009) where developing relationships and cooperation among peers and colleagues slowly starts to tear down the causes of isolation such as prescribed learning environments (Gereluk, 2009; Hargreaves, 1994), and the general sense that teachers are autonomous and they can't be "made to collaborate" (DuFour, 2011). Dodor, Sira & Hausafus (2010) write about *democratic professionalism*; an emphasis on professional learning with a focus on collaborative and cooperative learning between teachers and other educational stakeholders. More specifically, Dufore (2011), Heider (2005) as well as Dodor, et. al (2010) (to mention just a few) posit that these collaborations function positively in various types of learning communities where discourse advances understanding of professional practices. However to sustain significant change, teachers need to engage in learning as a contribution to the practice of teaching (Wheaton & Kay, 1999).

Knowledge Management (KM) is one perspective many businesses, and currently K-16 educational institutions, have considered in attempts to reform organizations. KM is not a *thing* or a canned program per se, it can be (however it is not always exemplified as) a flexible ideology. Friehs (2003) defines KM as the coordination and organization of personal and organizational knowledge. Chen and Chen (2008) define KM as the production, sharing, application, and transformation of knowledge. KM's aim is to transform personal knowledge into

organizational knowledge. In an educational application, Petrides and Nodine (2003) view KM as a broad framework or approach that helps people within an organization share what they know, develop practices, and collect information to advance the organization. Unfortunately, KM as defined by the previous authors is a relatively new idea for education.

By simply dissecting the terms *knowledge* and *management*, consternation occurs. There are many perspectives and definitions of *knowledge* and to actually manage it is often seen as an oxymoron (Wenger, 2005; Malhotra, 2002; Skyrme, 1997). Wenger (2005) suggests a definition that breaks down the KM concept by defining the term *management* as “to care for, grow, steward, and make more useful” (p.1). There is no one definition for knowledge; however, a social constructionist perspective tends to view knowledge as socially and cognitively constructed through an individual’s experiences in a particular context, whereas learners share their own understandings with others in an attempt to form personal, as well as, collective perspectives (Esnault, Ponti, Zeiliger, 2005). Knowledge, in this perspective, can be viewed as an “evolving continuously renewed set of relations” (Lave & Wenger, 1991, p. 50). Viewpoints of constructed knowledge tend to go beyond the individual perspective of *learning* in these aforementioned relations and focus on what the learner(s) did and what they created or reified (Wenger 1998; Papert, 1991) in essence demystifying knowledge as a *thing* and only existing in the minds of individuals. This perspective, perhaps, envisions knowledge as a symbol or representation of what has been objectified.

The concept of knowledge management is further developed for a wide range of uses by Nonaka (1994) and in later writings by Nonaka and Konno (1998), Nonaka, Toyama, and Konno (2000), and Nonaka and Toyama (2007). Nonaka's ideas of knowledge management revolve around the concept of the *Knowledge Creating Company* in which individuals become knowledge workers by participating in a knowledge conversion process. In Appendix C, Nonaka (1994) illustrates the concept of knowledge conversion in a conceptual model. The model exemplifies the transformation of self knowledge (tacit) to organizational knowledge (explicit) through a four stage knowledge conversion process: Socialization (tacit to tacit), Externalization (tacit to explicit), Combination (explicit to explicit), and Internalization (explicit to tacit) (SECI).

Knowledge conversion is carried out in context and is embodied by the Japanese ideology of *Ba*. *Ba* is a Japanese word that is roughly translated into the English word *space*. This space is far from a void, it is a shared space for developing relationships and knowledge creation (Nonaka & Konno, 1998). In Appendix D, Nonaka and Konno (1998) illustrate quadrants that represent the different types of *ba* that are necessary for the SECI model to operate.

*Ba* is a transformative space that has a "here and now" quality (Nonaka & Konno, 1998). Space is ever-present and to make it *lively* as an artist might with a sculpture, or to make it *active* or *effective* as a social artist may, would be a reflection of what did or did not transpire in that space. In the case of this study, the space is the means by which the participants come to acquire and construct knowledge through their discourse with each other (Gavelek & Raphael, 1996).

From a viewpoint of knowledge management, collaborative space (ba) for learning is an aid to encourage organizational members to acquire or create important organizational intellect through group activity (Takeuchi, Odawara, Hayashi, Ikeda, & Mizoguchi, 2003). In essence, a social artist is not creating space (brick and mortar) as much as he or she is energizing space with actions, for, in this case, collaboration and/or individual learning.

Gavelek and Raphael (1996) present an adaptation of Rom Harre's (1984) Vygotsky Space (See the Vygotsky Space theoretical model in Appendix E). The Vygotsky Space represents the dynamics of two different parameters; *individual* and *social* learning as well as *public* and *private* displays of learning (Gavelek & Raphael, 1996). The intersection of these parameters creates four quadrants slightly congruent with the SECI and Ba. Where SECI represents knowledge conversion within these quadrants, the Vygotsky Space represents a cultural model where individual learning happens in the midst of transferring across these parameters by which four phases of culturally situated processes ensue:

- Appropriation: The uptake of concepts from the sharing of knowledge and experiences.
- Transformation: The individual makes new ways of thinking by formalizing ideas into tangible representations of knowledge.
- Publication: The individual shares tangible products in a variety of ways.
- Conventionalization: The individual establishes new ways of thinking (as do others in the community) as socially accepted.

Gavelek and Raphael (1996) as well as McVee, Dunsmore and Gavelek (2005) both utilize this adaptation of Harre's Vygotsky Space to explain individual learning via the use of language (verbal/textual) as a participatory cognitive process within social interactions. However, the model is not limiting language as a mere reflection of individual knowledge, but a catalyst to what others think within these social interactions.

In essence, these three theoretical models (SECI, Ba, and Vygotsky Space) reinforce each other by overlapping to construct a much clearer model (I will call a Knowledge Construction Model (KCM) (See Appendix F for a conceptual model) to address the types of dialogues and actions needed by study participants in a knowledge construction process.

### **Intervention**

Developing *learning citizenship* (Wenger,2009) within a community of teachers will not happen by simple luck. Social artists lead others to collaborate, and share with intentional and purposeful action. By utilizing the theoretical models of Nonaka's (1994) SECI and Ba along with Gavelek and Raphael's (1996) adaptation of Harre's (1984) Vygotsky Space, I facilitated a process of knowledge construction via participant discourse in order to develop inroads for full teacher participation to benefit the future use and development of arts integration practices (see Appendix G).

**Quadrant I- Externalization to Appropriation.** Externalization is the process by which individual tacit knowledge is converted into explicit knowledge. This conversion crystallizes knowledge into written text so that it can be shared

with others. Via my action I intervened to develop a *Dialoguing Ba* (a public/social space for reflecting and sharing experiences) via a web log (Blog). Here, participants could share ideas and construct common terms and concepts through a textual dialogue. Participants could reflect on arts integration use in their classroom, report observations of classroom practices, and post ideas for expanding and developing arts integration products.

While externalization is the crystallizing of tacit knowledge, appropriation is the uptake of concepts and strategies used within this quadrant by the participants. In essence, the blog dialogue was integrated to help participants engage in new concepts and adopt them into their own scheme, plan, or ideas for arts integration. In addition, I intervened in these discussions as a moderator by pushing participants to deepen their level of textual discourse by utilizing, when necessary, scaffolds and prompts. Bonk and Kim (1998) proposes twelve learning assistances (see Appendix H for scaffolds and prompts) that can stimulate dialogue with community members. By utilizing email reminders, portal announcements, and e-newsletters, I promoted a cadence of on-line work throughout the study.

**Quadrant II- Combination to Transformation.** Combination is the process by which explicit knowledge is converted into more complex and organized sets of explicit knowledge. Via my action I intervened to develop a *Systemizing Ba* (a social space for collective interactions) by engaging participants to combine explicit knowledge gathered from Quadrant I with outside information (student achievement data, peer skills, case studies, research, etc.).

Participants were to work with school peers, CoP members (including myself) and/or their school level AIM teachers in face-to-face meetings to articulate the arts related skills (movement, music, theater) necessary to enhance a lesson or arts integrated product. However, because of my inability to meet with participants after school or on their prep periods, I organized two 8-hour writing sessions during which the AIM teachers (theater and dance) and I met with three participants in each session to help articulate their ideas into arts integration products. Developing an arts integration product was the goal for this part of the KCM as *transformation* is the notion that represents this *individual* part of the process. During this stage of the process participants reified their explicit knowledge, through writing, into tangible items that could be viewed by others in the organization.

**Quadrant III- Internalization to Publication.** *Internalization* is the process by which formalized explicit knowledge is embodied and actualized as tacit knowledge by participants through real life experiences. The explicit knowledge (lesson plans and other related organizational products) transformed in quadrant II are formalized in quadrant III. In this case, participants who completed arts integration products were to further formalize them in preparation to teach or present to other peers through the act of *publication*. I was to intervene, in part, to support participants formalizing their products and as a liaison in the publication of them (Nonaka, 1998). Unfortunately, my opportunities to intervene did not come to fruition due to a variety of factors including time and priority, not of mine but of the participants. Furthermore, the



participants, within the time of the study, were not engrained in the action enough to develop or maintain a *ba* for the participants to practice and share their creations for the purpose of disseminating new organizational knowledge. In addition, in January I continued to seek out groups of teachers, both school and district-wide, with whom participants could have shared. This opportunity fell through. This happened, again, because of time and priority of participants and others with whom I tried to connect with; time too was running out for me as deadlines were fast approaching. That being said, any work on these products happened after the study time frame on the participants' own time. I followed up with a survey (see Appendix I) in February to see if participants had even implemented their products in their own classes, or shared with peers - largely to see what might have happened within this quadrant despite my best attempts to help participants see this phase through.

**Quadrant IV- Socialization to Conventionalization.** Socialization is the process by which individual tacit knowledge is renewed in shared experiences. Much of the knowledge in socialization is existential and happens in naturally occurring spaces. Tacit knowledge is acquired in shared experience; that is, by working in a similar environment or spending time with colleagues, reading about the ideas of others, or observing peer actions. Via this action I intervened by fostering an *Originating Ba* (a public/individual space for face-to-face interactions to share feelings, emotions or to observe) by regularly visiting campuses, building rapport and relationships, and offering arts integration workshops. I helped establish the work the CoP completed as socially acceptable.

Conventionalization is evident when ideas and meanings of the CoP work have been incorporated into the fabric of the school community. Seemingly, any work that I facilitated had the potential to become the conduit for these social interactions - setting a stage for further participant engagement in developing deeper understandings of arts integration.

### **Chapter 3 - Methods**

Throughout the above intervention, I sought to answer the following, four research questions: 1. Do teacher-created discussions promote the appropriation of new ideas for arts integration lessons? 2. What constitutes full participation in this particular community of practice? 3. Can a CoP based in a knowledge construction process provide effective professional development for teachers? 4. What interactions best promote the use of CoP developed organizational products for arts integration?

In order to answer these research questions, I utilized a mixed-method, action research approach. Action research is grounded in a qualitative paradigm with a purpose to gain greater clarity and understanding of a question, problem, or issue (Stringer, 2007 p. 19). According to Eisner (1991), qualitative research is the search for *qualities* that reflect the characteristics of our own experience. Yet while qualitative methodology is at the core of action research, quantifiable data is also an important aspect that helps amplify data connections (Stringer, 2007). As such, I utilized a mixed methodology design to collect, analyze, and interpret both (or a mixing of) quantitative and qualitative data (Jang, 2008) to better understand participants' understandings of the intervention in which they were involved.

#### **Role of the Researcher**

In addition, action research is a systematic approach to investigation that enables people to find effective solutions to problems they confront in their everyday lives (Stringer, 2007). As a social artist, via this action I desired to help

and be of service to teachers by developing intellectual spaces (ba) for creative collaboration, ultimately to support the participation and engagement of teachers. As an action researcher, I approached this study as a means to inquire *with* teachers and expand arts integration learning and personal professional development – something of interest to them. I had an educative agenda as all of the interventions and subsequent findings were reinvested into the further development of a CoP for arts integration. In essence, I was a part of this community, leading the investigations and interventions to align thinking and human energy towards something bigger than each individual. My role was to inquire, lead, collaborate, and most importantly, to learn.

### **Participants**

I initially included thirteen individuals who expressed a desire to participate in the study. Two of the 13 potential participants were dropped from the study because they could not meet or did not respond to repeated requests to complete an introductory meeting. This left 11 total participants.

The 11 teachers who participated were all female. They represented a variety of grade levels and arts integration experiences. Four (36.4%) taught at the preschool to 3<sup>rd</sup> grade level; 27.3% (3) taught in the 4<sup>th</sup> to 6<sup>th</sup> grade level; 18.2% (2) taught in the arts; and 18.2% (2) taught junior high classes concentrating on a particular subject area (science and language arts). Participants also reported having a wide variety of teaching experience with 45.5% (5) having 16-22 years, 36.4% (4) having 6-15 years experience, while 18.2% (2) having 5 years of teaching experience. In terms of arts integration use, 27.3% (3) reported they

“always” used arts integration in their classrooms, 36.4% (4) used arts integration “frequently,” 27.3% (3) used arts integration “sometimes,” while 9.1% (1) claimed they did not carry out arts integration practices at all.

I also administered an informal, voluntary, on-line survey (see Appendix J) that helped me understand the participants’ experience with on-line social networking. Of the 11 participants, 73% (8) participated in this survey, and 62.5% (5) claimed they used social networking sites. The remaining 37.5% (3) claimed they did not use these on-line social networking services at all. However, all 11 respondents claimed that the preliminary exercise on the study blog site (regardless of their social networking experience) was either “easy” or “not too hard” to use.

### **Data Measures**

To answer my research questions specifically, I collected data that would help me understand how participants were learning about arts integration practices within the KCM (see Appendix F). I used two quantitative and five qualitative measures to facilitate the data collection process.

**Professional development survey.** A new innovation takes time to learn, and as stated earlier, teacher learning can be fostered or hindered by various factors. Constructing knowledge, the underlying process in this study’s theoretical model is germane to participant learning (professional development). Social artistry, too, is about engaging others in a learning process. Capturing the perceptions of participants’ past professional development experiences was an important part of the initial background information I needed for this study.

I administered a professional development survey I designed using perspectives situated in the ideology of the National Staff Development Council (NSDC, 2010), related literature on professional development (Sarsar, 2008; Huang, 2002; Schlechty, 2009), and literature relating to general survey research and design methods (Giuseppe, 2005). The survey (Appendix K) included 21 Likert-type questions situated within seven constructs. I piloted the survey with a group of non-study representative participants in the spring of 2010 and revised the questions based on an initial analysis of reliability (Gay, Mills, & Airasian, 2006; Cronbach, 1951). Each of the 11 study participants completed this preliminary survey in September.

**Pre-Post Survey.** The success of the Knowledge Construction Model (KCM), the innovation of this study, was dependent on the actions of the participants. Understanding the perceptions of participants' past and present experiences with dialoguing, collaborating, and sharing, in essence, allowed me to understand my innovation as a means to change. In order to capture these perspectives, I developed and administered a pre and post survey (see Appendix L) that would help me understand the participants' perceptions about various activities relative to the intervention. I developed this survey with five questions about various stages of the KCM process in relation to arts integration. The pre and post surveys were administered to all 11 participants, and I administered the pre survey in September and the post survey in December.

**On-line conversations.** A fundamental process in this innovation was the conversion of tacit knowledge (knowledge that can not be coded and often

thought of as located in a person's mind) to explicit knowledge (language). The process, specific to this conversion, involved participants writing their ideas and responses to others' ideas on an on-line blog. The purpose of collecting data within these on line conversations was to understand the nature of textual discourse and the appropriation of knowledge as it was situated in the innovation's first quadrant, *Externalization*. I focused on the dialogue within the blog to be the starting point for participants in the knowledge construction process.

In order for participants to participate in the process, I created a blog space on the districts Microsoft®SharePoint® employee portal. I developed a simple expectation of both blogging and commenting on another participant's post, at least one time per week. All 11 participants had access to the space 24 hours a day and they could use the site whenever they pleased, starting in September. The site still remains open for the participants.

**Informal interviews.** Informal interviews were a little more than a casual conversation (Gay, et al, 2006). The purpose of informal interviews was to dually create a sense of rapport with participants (as I was not a direct school colleague) and to collect data in terms of participant perceptions in a particular time and place. That said, the process of the interview was simple as I either asked about the participant's blogging or arts integration use, or both. I meant for the informal interviews to be unobtrusive, and if participants were available (during their prep, lunch, duty, or classroom time) and I did not disturb the educational process, I went ahead with the interviews. As stated earlier, most of the interviews were

about blogging; however, a variety of topics surfaced as I let participants talk as long as they felt comfortable doing so. In total, I conducted two rounds of informal interviews; one round in September and the other in October. I interviewed each participant, except one, at least once. As I mentioned, I based these interviews on a spur of the moment availability, and this missing participant was not available at the times I came to the campus for an interview. I audio recorded and transcribed all interview data for future analysis.

**Semi-structured interviews.** Because informal interviews were a bit unpredictable in terms of responses, I also needed more in-depth feedback from my participants. As semi-structured interviews help to capture the life world of a sample of participants (Kvale, 1996), conducting these afforded me the opportunity to delve deeper into how some of the participants lived with the intervention during their teaching days. I designed a semi-structured interview protocol (see Appendix M) around a series of questions related to each of the intervention quadrants. I also asked interviewees about the intervention as a framework for professional development and asked follow-up questions as a means to acquire more pertinent information.

To conduct these interviews, however, I utilized a purposeful sample of key informants (Stringer, 2007), and interviewed 27% (3) of the participants. I chose these participants because of their productive levels of blogging and collaborations with others. While I recognize that this sample was not representative, and this could be interpreted as a threat to validity given the fact that I collected interview data from such a small and highly productive group, it



was important to me to find out what was possible for future iterations of my action. To gather more representative feedback, I conducted a focus group. This will be discussed next.

But as for these key informant interviews, I interviewed each key informant, in his/her own classroom, once per person, during a 30-minute interview. These interviews were conducted at the end of November and the beginning of December as I wanted the participants to have multiple experiences prior; adding more potential depth to the participants' perspectives of the study. I audio recorded each interview and transcribed each for analysis.

**Focus group interviews.** The dynamics of a group interview are much different than those of an individual interview. The back and forth conversations of an individual interview take on whole new meanings when individuals' responses can be built upon by other participants in a focus group. Hence, I conducted a focus group interview to help me gain more of a shared perspective of participants' experiences via this intervention, and a shared understanding of disconfirming viewpoints that may have existed (Gay, et al 2006).

I conducted the focus group interview by asking participants three open-ended questions about particular operational ideas within the intervention (see Appendix N). I asked follow-up questions for clarification and to dig deeper into the groups' shared responses. I included everyone in the conversation as this precluded one or two individuals dominating the responses. Of the 11 participants, 73% (8) participated in the focus group session. The three missing participants were not distinctly different than the other participants. Their absence

was merely a situation of scheduling. I conducted this focus group in December, at the school site, during a one-hour session. I audio recorded the interview and transcribed it for analysis.

**Follow-up survey.** To address the shortcomings of this study, I also conducted a follow up survey by asking participants a series of five questions related to Quadrant 3 of the KCM (see Appendix I). As stated, participants were unable, within the time of the study, to refine their products for public sharing. The questions I sent out via email set out to find what the participants had done with the products after the intervention was complete. I conducted the survey with the six participants involved in the collaborative writing day in February, five of those participants responded.

### **Data Analysis**

**Quantitative data.** I analyzed the professional development survey and the pre and post survey using the Statistical Package for the Social Sciences (SPSS) in order to display frequencies, descriptive statistics, and relationships between and among data. I also utilized SPSS to calculate the significance of the effects of the intervention between the participants' responses on the pre and post survey via a paired samples dependent t-test. With that, I also analyzed the pre and post test responses for practical significance utilizing a Cohen's d effect size calculator (Cohen, 1988). *Effect size* is a measure of significance through substantive or "practical" means rather than statistical.

Furthermore, to examine internal consistency reliability of the quantitative instruments used, I conducted an analysis using SPSS to determine Cronbach's

Alpha Coefficients for each instrument used (Cronbach, 1951). Chronbach alpha results of .70 and above are commonly accepted as a marker for instrument reliability in the social sciences (Vacha-Haase, Henson, & Caruso, 2002). High internal reliability is typically influenced by little spread, or variance of participant responses on survey instruments. If participant responses are more alike, internal reliability is typically higher. Lower reliability, or a wider, more disconnected set of participant responses, could be caused by poorly written questions, questions that are not effectively hanging together or collectively capturing a construct of interest, or an inordinately small number of items included or participants responding.

I performed the alpha coefficient analysis of the professional development survey on each of the seven constructs and the instrument in its entirety. See results in Table 1 below.

Table 1

*Professional Development Survey- Alpha Coefficient Estimates*

Construct	Questions	Alpha Coefficient
1.0- Collaboration	1, 8, 15	.391
2.0- Data Decision Making	2, 9, 16	.340
3.0- Adult Learning	3, 10, 17	.432
4.0- Building Organizational Knowledge	4, 11	.753
5.0- Quality Teaching	5, 19	.870
6.0- Resources	6, 13	.896
7.0- Evaluation	7, 14	.894
Survey Instrument		.844

N=11

Overall, the questions on the professional development survey had a high, reliable, alpha coefficient (alpha = .844). However, reliability within the instrument's constructs varied. Construct 1.0-3.0 did not reliably illustrate the participants' perceptions about these specific professional development ideas. This was probably due to the fact that some of the questions in each of these constructs may have been confusing, an effect of poorly written questions and them not been connected to the construct as a whole. However, questions within Constructs 4.0-7.0 all were reliable indicators of participants' perceptions relative to these related professional development concepts.

In contrast, the pre and post survey alpha coefficients (see Table 2) yielded an acceptable alpha level. As this instrument included only one question for each of the five constructs included, I could only analyze the overall alpha.

Table 2

*Pre and Post Survey- Coefficient Alpha Estimates for Reliability*

Construct	N	Coefficient Alpha Pre Survey	Coefficient Alpha Post Survey
Survey Questions 1-5	11	.921	.838

Both the pre- and post- survey included highly reliable representations of participants’ overall perceptions of the specific actions within the KCM quadrants, before and after the intervention.

**On-Line Conversations.** As each blog and subsequent comment was posted, I recorded the author, date, and time of each post linearly across an Excel spreadsheet. This map-like format helped me capture the frequencies of blogs and general number of posts a particular blog dialogue contained. I recorded each post with the name of the author as to capture the asynchronous dialogue between all participants.

**Qualitative data.** I analyzed the on-line posts and all of the other qualitative data sets derived via the informal interviews, semi-structured interviews, focus group interview, and follow up survey in a similar fashion. Specifically, I transcribed the data into textual units of analysis within Microsoft Word. These units included the participant’s complete responses post questions or

inquiries. I subsequently cut and pasted these responses into an Excel spreadsheet and systematically scrolled through each response, recording representative key words or small phrases. A longer participant response may have had several key words or phrases accordingly. I then *open coded* these key words or phrases as a means to begin naming and identifying concepts. (Glaser & Strauss, 1967; Wiersma, 1995; Gay, Mills, & Airasian, 2006). I used tally marks to record the frequency of these concepts as more and more responses were analyzed over time and concepts began to hang together. I then collapsed these concepts into categories. Finally, through axial coding, I built relationships around categories to construct deeper themes (Glaser & Strauss, 1967; Strauss, 1987).

### **Triangulation**

The strength of mixed methods research lies in the process of collecting multiple sources of data to come to some sense of understanding about phenomena, in this case, phenomena around the converting of participant perceptions and constructing of participant understandings for the betterment of arts integration. The process of triangulating the data helped me do this.

Triangulation involves the process of cutting across two or more methodological techniques to cross-check similar themes among and in between different data sets to capture a more complete and valid picture of what is being studied (Wiersma, 1995; Gay, Mills, & Airasian, 2006). In this study I utilized a number of qualitative and quantitative methods to understand the perceptions of participants across data sources. Specifically though, in terms of triangulation, I connected quantifiable data (survey frequency, relational, and descriptive

statistics) with qualitative data (opinions, responses, and reflections) to support my constructed findings. These findings are presented next.

## Chapter 4 - Results

### Participant Perspectives

Throughout this study, there was a general sense of increased activity by the participants. This increased activity changed the perceptions of individuals about several perspectives of the work within the KCM.

**Professional Development Survey.** Again, I developed the professional development survey to acquire preliminary information as a means to understand participants' past professional development experiences. The results (see Table 3) also had the potential to illustrate connections to the processes within the intervention like dialogue, collaboration, and sharing.

Table 3

*Professional Development Survey by Item*

Q#	Always=5 , Frequently=4, Sometimes=3, Seldom=2, Never=1	Mean	SD
15	In your past experience, teacher collaboration has been pivotal to the attainment of teaching and learning goals.	3.45	1.29
1	In your past experience, the professional development activities that you have been a part of include a purposeful gathering of people with like professional interests.	3.27	1.10
13	In your past experience, you have places in district (virtual or physical) where you can attain appropriate and relevant information to better your daily teaching practices.	3.27	1.19
6	In your past experience, you have used technology to expand your professional development learning	3.00	0.89
10	In your past experience, your professional development learning lead to an immediate use and practice of a highly effective teaching concept or instructional strategy that you could use in your class.	2.91	0.30
5	In your past experience, professional development activities have helped me develop strategies that help me teach with higher levels of student engagement.	2.91	0.53
4	In your past experience, professional development activities allow me	2.91	0.53



	to share my ideas so I can willingly contribute to the school knowledge base.		
9	In your past experience, professional development is created by using current data of teacher instructional practices.	2.73	0.78
2	In your past experience, professional development has been created based on current student performance data.	2.73	0.90
19	In your past experience, professional development activities have allowed you to develop strategies that have assisted you to teach students to utilize higher levels of cognition (thinking).	2.64	0.80
14	In your past experience, professional development is evaluated based on the impact it has on student classroom performance.	2.64	0.92
8	In your past experience, teachers are deemed to be a vital part of the articulation of professional development goals.	2.55	0.82
3	In your past experience, professional development learning has been applicable to your personal needs as a teacher.	2.55	0.52
16	In your past experience, professional development has been created by using current data of how teachers articulate the district curriculum.	2.36	0.92
11	In your past experience, professional development activities allow me to share my ideas so I can willingly contribute to the district knowledge base.	2.18	0.87
7	In your past experience, professional development has been evaluated based on the impact it has on teacher practice.	2.18	0.75
17	In your past experience, teachers (including you) have had a choice as to what professional development they want.	2.0	0.63

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The overall mean scores revealed that participants, prior to this intervention, had very few, consistent past experiences with various aspects of professional development. For example, participants claimed they rarely had an opportunity to choose the professional development they wanted or needed. Likewise, participants also felt as if they had few opportunities to participate in professional development that addressed quality teaching, specifically in regards to higher student engagement or higher levels of student cognition. Both,

coincidentally, are important aspects of arts integration. These findings alone were important to this study as my role, as a social artist, was to develop the capacity of my participants to become better teachers through a shared sense of community and learning. I had to connect participants' seemingly low perceptions of professional development with actions within the intervention. These findings also set a platform for me to develop actions and subsequent ba (spaces) for collaborating, sharing, using technology, as well as conjuring action in response to participant's needs and interests; all important aspects of the KCM and the purpose for my intervention.

### **Knowledge Construction Model (KCM)**

In the following sections, results from the pre and post survey are presented, imbedded within the qualitative set of findings. These findings are organized around the four quadrants of the KCM. Also included is the quantitative and qualitative evidence that supports the impact of the actions that occurred through my intervention in all quadrants of the KCM. Next, I will discuss my findings for the first quadrant in relation to the work in which participants were engaged.

*Externalization to Appropriation.* Again, in this quadrant the goal for participants was to formalize tacit knowledge into explicit knowledge (Nonaka, 2000). In this study, this happened via contributing to an on-line blog. These posts were to serve as the nexus of shared dialogue with other participants. This is also where the appropriation, or the uptake and ownership (Gavelek & Raphael, 1996) of text, ideas, and concepts occurred. Appropriation, in this quadrant, can only be

inferred, however it was observed most notably in the arts integration products that participants created in the second quadrant. In total, there were 128 blog and comment “hits” that occurred during the study. Again, blog posts were to serve as the starting points for participants to share their explicit ideas; comments were to help with the expansion of them. Blog posts made up 24.2% (31) of these hits while comments made up 75.8% (97). Six blog posts went unanswered with no comments. All but one participant composed at least one blog and one comment. During the study, this participant rarely responded to email, and took only one of the two on-line surveys; she categorized herself as always using arts integration in the demographic information. In a few of the informal survey interactions, this participant claimed that the little work she had done on line was easy, and that she was swamped to do more. This theme of time connected to this particular participant was consistent throughout the study.

In addition, participants felt that they were dialoguing on a fairly regular basis as 81.9% (9) of participants noted that they had dialogued about arts integration with others *sometimes* or *frequently* in the year prior to the study. After the intervention, however, results revealed that there was a shift towards an increased perception of dialogue. In the post survey, 81.8% (9) of the participants responded that they had dialogued with others about arts integration *frequently* and *always*. Though there was a difference in the pre and post survey perceptions of participants, these changes were not statistically significant at the  $p < 0.05$  level between the pre survey means response of 3.73 (SD = 0.78) and post survey means response of 4.09 (SD = 0.70), ( $t(10) = 1.49$ ,  $p = 0.16$ ). But, not having

statistical significance does not necessarily mean that this change was not important. The power of these results was certainly limited by the small number of participants involved. With that, the actual effect size of the intervention, in regards to dialoging, was calculated at a medium level ( $d = 0.48$ ) (Cohen, 1988) that reflects a practical increase in participant perceptions of dialogue.

A further analysis of participant interview data allowed me to construct a better understanding of what occurred in this quadrant as well. First, I found that participants desired more participation in the blogging process. This would best happen, according to participants, not through an increased amount of blogging within the community as it was, but an increased number of people engaged in the blog. There were several connected ideas capturing a theme of sustainability specifically in keeping the work in motion, or “alive” as one participant put it.

Another participant commented:

Without a doubt, if we don't have this [blog] I think it would just die out. I really do think this dialogue needs to continue or it [arts integration] is just going to pass away, and it's going to go back right where we were.

Likewise, in the focus group interview, participants agreed that there would be a higher sense of success if there were more people engaged in the blog dialogue. A higher number of engaged teachers, according to one focus group interview participant, could lead to more available ideas to view for potential use. From a key informant's view, the more teachers involved would decrease the pressure to maintain a constant vigilance to the blog. Another key informant felt the need, phrased as “a guilt thing,” to blog for the study because there were “so few

participants.” This participant felt that if there were more peers engaged in the work, the onus would not be placed solely on a few to keep arts integration going.

This is an interesting discovery and I have come to understand, through this work, the “more is better” notion; however, the “more” is only “better” if the dialogue between CoP members lends itself to a deeper continuation with the construction of new ideas or concepts. As *blogs* were the nexus of textual dialogue, the *comments* had the potential to goad this continual discourse. However, not all comments, as participants reflected, had the power to preserve arts integration or the CoP for that matter.

Second, I found that participants were concerned with the quality of blog dialogue. When I asked the focus group a question about writing comments on others’ blogs, a participant claimed “they [the comments] are too nice.” This, non-derogatory remark surfaced other evidence of, perhaps, ineffective dialogue. Other participants in the focus group interview also commented on the positive (nice) nature of teachers as well. One participant claimed that she would always be a cheerleader for the group, encouraging the work. While another participant commented on the need for expanded comments:

I guess for me, kudos is always great, but no one is perfect no mater how long you are in teaching. I want that feedback, “Why don’t you try this?” or “Why didn’t you do this after that?” You know what I mean? I am always looking for that little bit more.

Focus group interview participants agreed that offense might be taken by those on the receiving end of seemingly helpful comments. It seems, in some

cases, participants were using the blog more to develop relationships rather than to construct knowledge. A further analysis of blog dialogues revealed that comments of non-facilitator peers were often filled with praise, feedback, or commiseration. For example, in the focus group interview, one participant commented that, “arts integration is so new right now” while another added simultaneously, “we don’t want to burst bubbles.” However, if new understandings were to be constructed and appropriated, participants needed their ideas expanded and built upon; this would take a different type of dialogue, perhaps one that used more constructive feedback.

In short, there was a general sense that participants did not always feel comfortable extending constructive ideas to each other. However, participants did note that they were more comfortable receiving that type of feedback from those with whom they had built relationships, particularly AIM teachers; this concern may speak to earlier ideas of professional isolation where participants rarely have time to talk to their peers about the work they do with children in more critical or constructive ways. In connection to this idea of quality dialogue and relationships, a third theme on externalization was constructed.

I found that my role as a facilitator was also noted in various interviews in that I attempted to engage participants in deeper textual dialogue. Being a social artist is about creating various ba, spaces for building relationships through participant interactions (Nonaka, 1998). Specifically, this part of social artistry was about facilitating the on-line dialogue so that it would continue to progress to where a participant’s original idea was built upon to a point that something new

would be constructed. To facilitate this, during the blog process specifically, I utilized several on-line learning assistances (Bonk et al., 1998) (see Appendix H) such as *questioning* (“In what ways do you use x, y and z?”), *elaborations\explanations* (“I am not sure what you mean by x”), and even *praise and feedback* (“that was a great idea”).

Participant interviews revealed that my comments utilizing these on-line learning assistances expanded their dialogues and the understandings of their topics as well. One key informant remarked that my comments on the blog, “Pretty much made me articulate what I did and why I did it. You would make me go back and articulate.” The same participant also added in the focus group interview, “I guess I had to think about the process. Go through, start at the beginning, and figure it out.” In both focus group and key informant interviews, participants also remarked that my comments, “kept us going,” “[They] made me go back and look at [the comments] and post something [in response],” as well as “[they] made me think about them [ideas] in [sic] a whole different perspective.”

This concept of scaffolding or assisting an on-line conversation was simple, and I found that it was important to facilitate the participants’ posts to help them to potentially articulate and deepen their own understanding of arts integration ideas. Some participants took advantage of the blog and subsequent discourse and realized the benefits of expanding an idea in this modality, most notably observed in the next quadrant (combination to transformation) intervention. Conversely, the pattern of blogs and comments were not always followed.

I also found within this study that some participants made face-to-face comments rather than writing their comments out on the blog, using the blog along with interpersonal dialogue. One participant noted:

[L]ike we would see each other and go, “did you see that”...or “I didn’t respond but let’s talk right now about it” so the fact that it [a blog comment] was there doesn’t mean it was useless if we did not necessarily get into it [blogging] as much as we should have... but it spurred on [sic] conversations at the copier or in passing.

Another example of this came from a key informant who also acknowledged these short periods of face-to-face contact:

I ran into [another participant] and she got my comment, and she was like “I loved it” and absolutely took the conversation from the site to real life and I thought that was really cool in passing. I gave her some ideas as we were walking back and forth from duty.

In some cases, the choice to not utilize the blog to comment was purposeful as talking was “easier” than writing, as one key informant stated:

I think it [talking] is easier. It’s hard to put into writing what you are thinking of doing with your kids. I found it hard. I could go and talk with her [AIM teacher] for five minutes and that would be it, instead of a page long of typing instructions.

These passing comments were not counterproductive, however. In fact, they seemed to be important, facilitating the coherence of a community as they helped each of the participants share a sense of purpose and repertoire (Wenger, 1998).



Although I found that in some cases these face-to-face dialogues may have stunted the power of the extensions of on-line dialogues as many blog posts and comments were left hanging.

In summary, I found that externalization was a key process to setting the foundations for this CoP. As participants engaged in the on-line textual discourse they essentially “self-transcended” - they became part of the group (Nonaka and Konno, 1998). What was desired by the CoP members was a cadre of “self-transcenders” - a purposeful community that brings action and a wide sense of responsibility to the whole group and to the mission of the CoP. However, the sample of participants in this study was dispersed among grade levels and these participant relationships, though positive, needed time to grow so that, perhaps, more on-line dialogue could have transpired within this quadrant. As a social artist, I found it challenging to constantly stir up participation using only my text on a blog, and in that, support relationships so that participants could trust each other enough to also expand their CoP members’ perspectives with poignant dialogue in this seemingly impersonal environment. Supporting a ba for textual dialog, was necessary in order to create the concepts and ideas that needed to be developed in the next quadrant through collaboration and creating products.

***Combination to Transformation.*** Again, *combination* is the process by which explicit knowledge is converted into more complex and organized sets of explicit knowledge (Nonaka, et al., 2000). This happens through a synthesis of various information and a breaking down of concepts derived in Quadrant 1. *Transformation*, in part, is a private process where participants take ownership of

their ideas (Gavelek & Raphael, 1996) and can be illustrated through the reifying or objectifying of knowledge into physical things. Though this transformation is important, I did not focus on the products the teachers created. I gave no direction to the specificity of the product in its design, nor its quality or content, only that it should be something to share with others in the future. I felt that putting too much restriction on the product would have a negative impact on the creativity of the teacher. I wanted participants to think of the best ways this product could be shared with others; I was open to video clips, lesson plans, unit plans, visual maps, etc. Along with these products, this quadrant can be exemplified through the actions of the participants in the collaborative writing day that took place in October. Presented next are the quantitative and qualitative data that reflect the evidence of what occurred during this intervention via the second quadrant of the KCM.

The quantitative data included the results from the pre and post survey. The question of focus captured participants' perceptions regarding collaborating with other peers about arts integration, and results were encouraging. Positive increases in participant perceptions about collaboration were evident over the span of the study. On the pre survey 45.5 % (5) of the participants claimed that they collaborated with others *seldom* or *never* in the year prior to the study. After the intervention, these two categories (seldom or never) were not referred to as there was a large shift in participants' collaborating behaviors. The post survey revealed that 90.9% (10) of the participants claimed that they collaborated with others *sometimes* and *frequently*.

Though these changes were notably positive, again indicating increased perceptions of engagement in more collaborative experiences, these results were not statistically significant at the  $p < 0.05$  level between the pre survey mean of 2.91 (SD = 1.30) and post survey mean of 3.36 (SD = 0.67), ( $t(10) = 1.16$ ,  $p = 0.27$ ). A low number of study participants, again, probably impacted these results. With that, the calculated effect size revealed that the intervention increased collaborative behaviors to a medium degree ( $d = 0.43$ ) (Cohen, 1988).

While the quantitative data informed me about the increased sense of collaboration, the qualitative data I analyzed revealed other evidence about the effectiveness of the parts of the intervention that occurred within this quadrant. Presented next are two themes which represent participants' perspectives accordingly.

First, I found that the collaborative writing day was seen as a positive experience as per the participants involved. One participant claimed that, "it was exactly what we needed" and another claimed that "we need[ed] this time together." In the focus group interview, one participant commented that during this time she was able to see what her CoP peers were doing across grade levels, and she was able to "compare notes" via what was seemingly a positive, rare opportunity to collaborate. Participants stated that just the pure conversation with other participants during this time was a key component in support of this quadrant. One key informant stated:

It was nice to be able to talk with people...I don't understand why they [leaders] don't just give you time [to collaborate] and then ask to see what

you did. I don't think any teacher has a problem showing what they made or came up with [as evidence of collaborating].

One participant, during a key informant interview, desired to connect to peers of a closer grade level during the writing session, however. She noted:

I think it would have been easier if they [the third grade team] would have been in the lesson writing process with me.... [I]t [the arts integration product] might have looked a bit different by the time we, all three, put it together... we all want all our input, not just one person, so my personality [solely] doesn't show through with this and theirs does.

Participants seemed to value these collaborative moments as there was a common desire to work together for the greater good for arts integration.

However, outside of this writing day, I found that participants who were classroom teachers rarely collaborated with other classroom teachers for arts integration; they sought out other campus peers. This brings me to my second finding.

Having AIM teachers on campus was a key to most of the collaborative efforts for classroom teachers. Again, because the AIM teachers were meant to help participants articulate their arts integration ideas, participants perceived the AIM teachers to be of great importance. For example, participants mentioned that the AIM teachers had skill sets and experiences that made collaborations for arts integration possible. One key informant mentioned:

I feel pretty comfortable with arts integration, but I know you can always get better; and they [the AIM Teachers] are doing this day-after-day, with

all different grade levels and all different content areas. They know what's working and they have more experience.

Another participant stated during a key informant interview:

I have gotten better with the movement and the readers theater and that portion of the arts integration, but I would have to say the actual visual art of drawing, no, not my stick figures (laughs). She [the AIM Teacher] has all of the experience in the art, the supplies, art lingo, and techniques.

In one case, a participant and an AIM teacher were working on a lesson together, the participant reflected on the process that ensued:

[W]e decided to change it [the lesson], so pretty much with her background she was able to change it to a theatre and movement lesson. She [the AIM Teacher] was also able to choose a [theater] grouping activity which she already knew about, which really helped the kids with the idea of having to get into groups quickly.

During collaborations, as exemplified above, the skills and experiences the AIM teachers sharing with the participants not only made the collaborations possible, but seemingly effective.

Yet, there was evidence that participant collaborations sometimes came about in very different ways. In one case during the study, a study participant (science teacher) discussed in a key informant interview her work with an AIM visual arts teacher. This art teacher helps with arts integration on campus but was not part of the study. The science teacher participant, however, had dialogued on-line about a lesson idea utilizing drawing and observation skills with another

study participant and me over a few weeks time. The science teacher participant, essentially, crossed over the boundary of the CoP and strayed from the KCM to work with the art teacher to create a very dynamic integrated lesson utilizing visual arts. Interestingly, each had never had a collaborative connection, had engaged in extensive on-line or a face-to-face dialogue, or had even a close professional relationship prior to this endeavor. As the science teacher participant pointed out “I rarely saw [the art teacher]. We live in two very different worlds.” Essentially, they relied on brief interactions in passing and at staff meetings and occasional email correspondences. Each brought their skill sets and ideas to a lesson concept and allowed it to unfold in the classroom with children. They were collaborating in the moment, team teaching to some degree, and flip flopping roles as lesson leader - the art teacher led primarily in the first few periods and the science teacher led in the later periods of the day. Both teachers, especially the science teacher, whose idea this was, were learning as they taught.

This practice is not uncommon and has happened in other classrooms at the focus school. In the hands of a very competent art and science teacher (as was with this case), this lesson was met with a great deal of cross curricular learning and some interesting student work (oil pastel drawings) that demonstrate science and art understandings (see Appendix O). However, if we take into consideration the potential for the development of organizational knowledge in a process like the KCM, we have to consider this event, perhaps, as having only success at a myopic classroom/teacher level, as it was carried out by these teachers.

In summary, I found that collaboration was important for participants when learning how to utilize arts integration in their classrooms. Participants responded well to the idea of a writing day; a time for discussion, articulation and negotiating meaning about arts integration ideas. As a social artist, I developed a *Systemizing Ba* where relationships are built around the collaboration of existing explicit knowledge. With that, I also found that finding the right people (AIM teachers in this case), who have the right skill sets and experiences for collaborative work for arts integration, was of utmost importance. These individuals helped the CoP participants focus in on their ideas, and helped add and address ideas for arts related content that paved a way for the participants to create their products for future use and dissemination.

**Internalization to Publication.** *Internalization* is the process by which formalized explicit knowledge is embodied and actualized as tacit knowledge by participants through real life experiences (Nonaka, et al, 2000). This happens in an Exercising Ba or a space where, in this case, arts integrated products are utilized by participants as a means to reflect and make better through trial and error (Nonaka, et al, 2000). *Publication* is the process by which a person's meanings and strategies can be made public so others can respond (Gavelek & Raphael, 1996). This quadrant, however, was not seen to completion in the study as time ran out at the end of December, and repeated attempts to retry to connect with participants to help refine their products in January and February fell through. Therefore, all results from this quadrant, are based on the participants' own work with the products they created, unassisted by me. I captured what

participants had done with their products, if anything, via a follow-up survey, on which I will report later in this section.

The quantitative data included two pre and post survey questions regarding this quadrant, both of which had a wide variety of participant responses. Both questions referred to sharing arts integrated products with others. The first asked about sharing with school peers, while the other asked about sharing with those outside of the school boundary. The first question regarding participant's perceptions of sharing within the school with other school peers rose slightly over the span of the study. In the pre-test, 9% (1) of participants *never* shared their arts integrated product with peers inside the school; 36% (4) shared within the school *seldom*, 36% (4) shared *sometimes*, and 18% (2) claimed they *always* shared arts integrated products with peers within the school. In the post test, 9% (1) of participants *seldom* shared within the peers inside the school, 64% (7) shared *sometimes*, 9% (1), shared *frequently*, and the remaining 18% (2) shared arts integration products *always*. This evidence suggests that even though I did not intervene in this quadrant of the KCM, participant behavior in sharing their products with others within their school, increased over the span of the study.

In contrast, the pre and post survey question asking about sharing products outside the school decreased over the span of the study. In the pre-survey, 45% (5) of the participants *never* shared their arts integrated product with peers outside the school, 27% (3) seldom shared their products outside of their school, 18% (2) of the participants claimed they *frequently* shared with those other than school peers, and 9% (1) participant claim they *always* shared their arts integrated



products with peers outside of the school. In the post-survey, 64% (7) of the participants claimed they *never* shared their arts integration products throughout the study, 18% (2) participants stated that they *seldom* shared with others outside the school, while 9% (1) of the participants *frequently* and another 9% (1) of the participants *always* shared their arts integration product outside the school. These results indicate participants have less interest in sharing outside the school. This may be indicative of the community like atmosphere of the group, perhaps giving way to closer connections to school peers and a desire to increase the capacity of the school with arts integration practices.

Though the pre and post survey for the first question (related to sharing with peers in the school) showed an increase over the duration of the intervention, the change was not statistically significant at the  $p < 0.05$  level between the pre survey mean of 2.82 (SD = 1.25) and the post survey mean of 3.36 (SD = 0.92), ( $t(10) = 1.60, p = 0.14$ ). The limited sample of study participants contributes to this outcome. As a result, the calculated effect size reveals a medium increase in the participant behaviors related to sharing with peers within the school ( $d = 0.49$ ) (Cohen, 1988). In contrast, the second pre and post survey question relative to sharing with peers outside of the school, showed a decrease over the duration of the study. The difference between the pre survey mean of 2.18 (SD = 1.47) and the post survey mean of 1.64 (SD = 1.02) was not statistically significant at the  $p < 0.05$  level ( $t(10) = -1.25, p = 0.23$ ). Like the other related question, these results, too, are a consequence of a low participant sample size. Taking this low sample size into consideration, an effect size (Cohen, 1988) was calculated and it was

determined that the intervention had a medium effect ( $d = 0.42$ ) as it reflected a decrease in participant behavior in sharing with their peers outside of their own school.

Next are the qualitative findings related to this quadrant. These findings are indicative of participants' perceptions of actions that transpired without my intervention sometime after my intervention was complete. These findings are presented given the questions I asked and are represented by the findings developed in analyzing participants' responses.

I first asked the participants about what they were thinking when they developed their product for arts integration during the writing session. Four of the five responses to this question, were based on the participants', specific, original blogged ideas. Generally, the participants mentioned that they were seeking new ways to teach reoccurring content in their own curricular repertoire. For example one participant wrote:

[I wanted] to use the arts to teach students story parts - beginning, middle, and end - as well as helping students understand the "Flee Map," which our school uses for students to organize their writing.

Another participant mentioned:

I was looking for a new way to integrate methods that had already started in my classroom. I was intrigued by [another teacher's] description of her using word painting to increase [reading] comprehension.

While there seemed to be a sense of appropriated concepts from the blog, then to a transformation of those concepts into products during the writing day, this

evidenced that further development of the participants' arts integrated product did indeed ensue.

When I asked what participants had done with their product after the writing day and how they made it better, all teachers mentioned that they had worked with the product in their class with students at some point in time. One participant claimed she did not make the product better at all, and three participants claimed that they made the products better through practice or repetition and/or the further inclusion of an arts related concept. One participant wrote that:

I tried the sequencing flow map three or four times and was a little discouraged at how difficult it is for 3<sup>rd</sup> graders to recognize the beginning, middle, and end of a story. Yesterday, I tried again to use the Flow Map, and we had great success. Always starting with simple stories, I read a picture book to the class. Then, we completed the flow map with the details ("Tell Me Mores"), and they were much more able to do this. I was very encouraged. But I now know that more practice using it is what students needed to do it successfully. As far as going further with the movement and Tableau, [AIM Teacher] was in my class today and will be back tomorrow to help students use movement and Tableau to sequence the events from the story into a Slide Show performance. Just having her [AIM Teacher] in helped me to understand how I could do one of these [tableau slide show] again. Again, more practice is what it takes.

Another participant wrote about the use of her developed concept of improvisation in her 1<sup>st</sup> grade class and reported that she believed she had seen improved results for students:

Since this writing day, it's amazing to me the ability my students now have to improvise. For example, we have been studying penguins and learning some difficult vocabulary words such as incubate, regurgitate, porpoise, skua, etc. One day, I asked my students to show me movements [dance] for each vocabulary word we had been discussing. All students were able to either think of their own or "copy" from someone else immediately. There was not one kid disengaged. At the beginning of the year, many students were hesitant or unable to think of their own idea.

Nonaka and Konno (1998) posit that knowledge is continually enhanced by the use of formal, explicit knowledge through “real life simulated applications” (p.47). The above exemplify these actions within this quadrant. Participants reported continuing to use their products in this refinement stage in their “real-life” simulation of their classroom. The purpose of the refinement was to polish a product to share with others. This represents the concept of *publication*.

I asked the participants if they had shared their products with anybody in or outside the school. Two participants claimed they did not share their product with others, while the remaining three mentioned they had. Of the three participants sharing, two claimed that they shared with those inside the school and the third claimed to share outside. One teacher wrote in response:

Yes, [I shared with another] team member...I gave her the lesson during our team [grade level] planning and we both taught it in our reading classes. Also [another special education teacher] and her aid were also in the room while we were working on the play.

Another teacher commented that she also shared with her grade level colleagues:

I have to admit that I have not shared this outside of the other grade level teachers. I do not feel secure enough on this to think it would be helpful for others, even though it has helped [my students]. The other two teachers [grade level] are also trying it, and I do not know how successful they feel. They have not said much about it.

Likewise, I have no information as to how other teachers felt once given or presented the arts integration product by the CoP participant; nor do I know what these non-participant teachers did with the products in their own classrooms. This was not for a lack of trying, however, as I did attempt to connect with these teachers. Unfortunately, I had no luck persuading them to spend a few minutes with me to do this.

In summary, I can only imagine what things would have looked like if I were able to intervene with participants in this quadrant. Surprisingly, without my planned intervention, however, I found that five of the six participants moved ahead with their products and tried them out, and in a few cases, tried them several times as a means to see some student success. Nonaka, et al., (2000) mentions that an intervention in this quadrant is “enactive liaising” or being the liaison between the product, the creator, and the consumer (p.11). In my role as a

social artist, I would have helped the participants through their trial and error period, perhaps alleviating any, as one participant revealed, uncertainty of their work; helping them develop a more concise and finalized product for sharing with others to build on the CoP and school culture in regards to arts integrated practices.

***Socialization to Conventionalization.*** *Socialization* is the process by which individual's tacit knowledge is renewed in shared experiences. This happens in an *Originating Ba* or a space for building important community characteristics like coherence, trust, rapport, love, and commitment (Nonaka, et al., 2000). Tacit knowledge may also be attained through social experiences like observing a teaching artist, attending a staff meeting, participating in hands-on experiences, or just talking to a colleague. *Conventionalization* is the process by which an individual's actions and ideas become part of the communities' discourse (Gavelek & Raphael, 1996). This may have more clearly transpired if practices or ideas from the formalized arts integration products from quadrant 3 were presented to school colleagues and the ideas had become a part of the community discourse. Though I have some evidence that sharing transpired, I have no explicit evidence that this knowledge had become a part of the community talk.

Socialization is a tricky quadrant to study, however, because it is hard to capture what is inside of participants' heads (tacit knowledge) on an ongoing basis. Knowing this and the idea that an *Originating Ba* is about creating relationships around shared experiences, an existential perspective (Nonaka et al,

2000), I focused on the condition of the environment and what happened in it as a potential road block or pathway to more engaged learning for arts integration. Presented next are the quantitative and qualitative data that reflect the evidence of what occurred during this intervention that is representative of this fourth quadrant of the KCM.

The quantitative data included the results of the pre and post survey question that captured participants' perceptions relative to this quadrant. The pre and post survey question asked participants about their level of arts integration dialogue and shared experiences in their typical daily social interactions. Once again, the results revealed an increase in these behaviors over the span of the study. On the pre-survey, 9% (1) of the participants responded that they *seldom* dialogued or had shared experiences in arts integration in their daily social interactions; 36% (4) claimed they dialogued and had shared experiences in arts integration *sometimes*, 36% (4) claimed they had these experiences *frequently*, and 18% (2) had these experiences *always*. After the study, participants responded to this question with a slight, upward shift as 18% (2) claimed they dialogued and had shared experiences *sometimes*, while 64% (7) claimed they had these experiences *frequently*. There were 18% (2) of the participants that remained in the *always* category.

As it was with the previous quadrant analyses, though the perception of these experiences increased, the changes were not statistically significant at the  $p < 0.05$  level between the pre survey mean of 3.64 (SD = 0.92) and post survey mean of 4.0 (SD = 0.63), ( $t(10) = 1.49$ ,  $p = 0.16$ ). Again, the lack of significance

is more than likely due to a low sample size of study participants. With that, the calculated effect size revealed that the intervention increased shared social behaviors to a medium degree ( $d = 0.45$ ) (Cohen, 1988).

Once again, the quantitative data facilitated a partial perspective of this quadrant. However, the qualitative data I analyzed revealed other evidence that helped present a fuller picture of what seemingly occurred. Presented next are two themes which represent specific participants' perspectives of this quadrant.

First, I found that participants observing and taking part in arts integration experiences helped participants think and talk about arts integration. These experiences came mostly from teaching artists, but other arts integration learning experiences also came from peers and CoP members on the campus. During this study, for example, a visiting Kennedy Center artist worked on the campus for four days. In an informal interview, just a few days after the residency, a participant stated:

I only saw [the teaching artist] for about forty-five minutes. Did not get to, you know, see as much, but I saw some things in there that I would use. I could see, especially, um...we do the land forms and the different bodies of water... and we could pull some of that stuff [dance and movement] in.

Another participant commented, in an informal interview, about her observations of the same teaching artist and saw future use of the skills as well. She stated:

I really liked some of the mirroring techniques and I like the sculpted [hand] shapes...particularly that portion, because I can see them [the students] doing that at their desks.



Likewise, another participant commented about visiting artists in a key informant interview:

[W]henver the visiting artists come we learn a lot in the workshops. I think observation is probably the biggest [aspect of their residency]. I think repeating what you've seen... I've seen [one of the teaching artists] three times, so I'm good with that [arts integrated teaching strategy].... So I think being able to see the same techniques multiple times really helps, like really gets it into your head.

Besides the teaching artists, participants in the focus group interview talked about their arts integration experiences with each other and how these experiences led to shared experiences in, and understandings of arts integration as well. One participant mentioned:

Like [another teacher participant], just yesterday she was doing the whole character creation and normally you would not just come up and say, "I am doing this in my class do you want to come and watch," but when we all found out she was doing it, we wanted to come watch. So, I think it is opening up that conversation a lot more.

The above evidence points strongly towards observation as a central tenet to arts integration learning. Opportunities to observe peers or teaching artists engaged in arts integration activities adds to the mental inventory for further interactions with other school peers. However, teachers must have an environment where it is safe to think, converse, and interact about arts integration to tend to their basic desires to inquire and act upon opportunities to use arts integration in the classroom.

Second, I found that the focus school was perceived to be a highly desired place that is conducive for arts integration growth. Some of the participant comments were favorable with examples like “this is an awesome environment” or “it is a positive environment,” while others noted that the school was “open-minded” and the “administration has an open mind.” To that, another participant stated, “I think we have a lot of open-minded teachers who are willing to try it [arts integration] even though it is out of their comfort zone.” One participant commented on the school environment by stating:

I think it’s awesome. With my own [grade level] team they are very willing to try and willing to let me test things out first; they want to try what I am doing. I think everybody here wants to teach like this... I think everybody is very receptive to it.

During a key informant interview, one participant compared the school to that of a community.

I have very much always thought [the school] had a community. They have even referred to us as the [the school] family. You know, they are very much open [to help].

Yet while this school has an ostensibly positive environment, there were some opposing perspectives. In this case, however, the perspectives are not so much critique of the school, but concerns for the preservation of arts integration.

Arts integration is receiving more attention than ever at the school as AIM teachers have been directed to work with more classroom teachers, professional development and staff meetings have some component of arts learning addressed,

and a visioning committee consisting of various teachers has also been started to develop and implement a five-year plan for arts learning. A major concern that was mentioned in participant interviews, though, was about a sense of resentment with teachers not involved in arts integration, or a “professional jealousy” as one participant noted. This disproportionate attention has left some teachers feeling that they are outside the innovation’s focus to the point that receiving positive attention around arts integration work is becoming a concern. One participant noted:

[S]he [the AIM teacher] will say right in front of staff [in meetings] that I am an expert...I’ve asked [the AIM Teacher] please don’t say that in front of the whole staff...I think that’s hard especially with grade levels and teachers that [sic] work together.

Another participant brought up the topic of resentment in that many teachers felt they were not able to participate:

I’ve seen it and a couple of the other teachers brought it up that there was a lot of resentment, some teachers got to go to meetings, some were invited to go here and some got to go there, and if it’s not open to everyone, teachers’ get their feelings hurt...it almost turns them totally against it. Like the summer institute, there are only so many positions. Afterwards we heard a lot of “I should have gone to that,” “I didn’t know about that.” So teachers feel left out... I have seen some resentment on [sic] not being able to participate.

During a principal led visioning meeting I attended, teachers were reflecting on a comment made in a previous staff meeting about “who are these people being chosen” in response to a participant being chosen to share an arts integrated strategy in a school assembly. In a key informant interview, the topic resurfaced again. The participant stated:

[A]nd there was a big thing about it [the comment and the assembly performance], I don't know. I think we need to find more ways to get all the teachers noticed, maybe that will help. I think some people are feeling like only certain people are getting recognized. I don't want that either.

When asked if she felt teachers were getting preferential treatment, she stated:

I mean, I go to the meetings; it's open to anybody, so if you are going to go to the meetings... come on in! I think everybody here is on board, and I think everyone likes teaching that way. [Teachers] like the creative parts of it, but there are just little things going on, on campus, that [administration] needs to fix.

Finding ways, as this participant suggested, to include everyone is a challenge, but necessary to break down what seems to be a contrasting duality of social needs. The school, as a whole, desires to maintain a sense of family and togetherness. Likewise, the hard work of arts integration adopters deserves recognition for their own individual contributions to this school.

In summary, within this quadrant I found that the school as an environment for shared experiences seemed to be an important part of the success of arts integration. As a social artist, I found that developing an originating ba for

this type of work can be done by offering opportunities for participants to learn, to observe, to reflect and interact about arts integration. Clearing pathways for participants to achieve organizational goals (allowing participants a choice of classroom topics to address, for example) and listening to their needs, perhaps, breaks down some of these social hurdles common in human organizations. These hurdles can inevitably limit thought, not to mention limit the social connections needed to expand participants' understandings into other arts integration ideas.

## Chapter 5 - Findings

Overall, this study and its subsequent findings provided me a sense that I was working in the right direction to keep arts integration practices growing for the benefit of interested teachers. The KCM moved most of the 11 participants off the periphery of participation, and to some degree, closer to “mastery” (Lave and Wenger, 1991).

Specifically, in response to research question one, whether teacher-created discussions promoted the appropriation of new ideas for arts integration lessons, I found that an on-line blog positively supported beliefs and impacted participants’ perceptions about arts integration discussions. As a result of this dialogue, newly appropriated ideas were formed that supported the creation of new arts integration products. These blog opportunities allowed participants to post their ideas and thoughts about arts integration and offered opportunities to read and comment on other participant’s ideas. In addition, as the facilitator of the blog, I was able to give participants opportunities to delve deeper into their original ideas as evidenced by many of the strands of blogs and comments, particularly those directly facilitated by me. Participants reported that they believed this allowed them to deepen their existing understandings in order to construct new understandings as well.

While responding to research question two, what constitutes “full participation” in this particular community of practice, I realized I carried some misguided ideas into this study as I was worried about holding people accountable for their participation. In turn, I found that “full participation” (Lave and Wenger,

1991) was very difficult to define, however in its simplest form, it is a manifestation of participants negotiated meanings, by which Wenger (1998), posits that this exists in a duality of participation and reifications. Therefore, understanding full participation was not simply a matter of counting instances of blogging, commenting or collaborating; nor was it holding participants accountable for a predetermined number of those activities. Instead, participation was better evidenced in the things that were created in connection to this work. And the more I engaged, the more participants had the opportunity to reify (i.e. post blogs, post comments, and develop arts integrated products). As a social artist, I guided participants to varying levels of reification. Because reification always rests on participation (Wenger, 1998) we can connect one with the other. That said, I found that over the study and due to my intervention, participants reported an increase in behaviors related to participation. However, in the short time period of the study, and with the shortfall of the work in the third quadrant, “full participation” was not met, nor did I develop or examine a particular model to meet it.

In response to my third research question, whether a CoP based in a knowledge construction process can provide for an effective model of professional development, I found that the model carried with it many qualities of effective professional development. In their research review, the authors for the Institute for the Advancement of Research in Education (2004) claimed that effective professional development incorporates technology, addresses student learning, is job embedded, is collaborative, and it occurs over time. This

intervention, as previously evidenced, addressed these characteristics. For example, a first grade teacher used the blog to dialogue about an arts integrated idea that addressed recall of classroom content via the use of improvisational techniques in movement; this led to various collaborations about product development and refinement by using the work in her classroom over time. This situation would mirror many instances in this study. Furthermore, also exemplified was the idea that professional development was not relegated to monthly meetings. The KCM provided the participants continual engagement of “educative experiences” where “learning [lead] to more learning” (Dewey, 1988).

With that said, the KCM offered opportunities to break down the walls of teacher isolation related to their own learning as was mentioned earlier in this paper. Participants stated in many ways that this model was very collaborative as there was a sense of value in their learning from each other. There were several related comments of “we are talking to each other more” and “[KCM process] makes us seek each other out,” along with comments regarding participants “checking in on each other.” One participant felt encouraged to hear from other participants and peers. Likewise, participants also felt that the KCM put arts integration “on their mind” more often. One participant felt that the process lends itself to learning more because she and her colleagues were “in the mix,” inferring some consistent engagement throughout the study.

Because time ran out in my study, however, I was not be able to answer the fourth research question regarding what interactions best promoted the use of arts integration products. If this came to fruition, I would have been able to help



teachers use their arts integration product in their classroom and at the same time, refine them into products that would have been more likely to be shared with others. If there was time, I would have helped the participant share their arts integrated products among school grade levels, perhaps among district wide subject area groups, and even at school staff meetings with the hope of understanding how and what specific interactions benefited the dissemination of the products.

## Chapter 6 - Conclusions

“Did you see that kid?” “That was unbelievable!” “I did not know they could do that!” These were some of the phrases I heard from several teachers, in a post artist residency session, reflecting on how 7<sup>th</sup> grade students reacted to choreographing a dance that represented the metamorphic formations of various rocks. I also saw tears and smiles and faces of joy, often with a mix of disbelief and salvation when looking at the teachers. Why is this? Arts integration is not new, but in today’s prescribed environment of standards-based curricula and high-stakes, standardized tests, the instructional strength of this intervention seemed almost like a keepsake participants used to own, lost over time, and did not want to lose hold of again.

That said, as a social artist, I continue to see my role as creating change, being comfortable and fluid with multiple cultures, and working on the whole-system. I desire teachers to see their work through the eyes of an artist, a natural leader who thrives on persistence, creative resolve, a global perspective and taking chances. An opportunity to see curriculum as a roadway to connections and inquiry rather than a checklist, to see a child as a wealth of knowledge rather than an empty slate, and to treat leadership as an artistry - a performance of a practice, that is enhanced through seeing and reflecting on what had been created (Eisner, 2002). With this, I aspire to do this work with other groups of teachers in differing schools and department contexts. Given the results presented herein, I believe this intervention could be easily scaled-up and sustained for enduring change in arts integration practices.

To scale this work up (more rather than less) would require the duplication of the mechanism of the KCM so other seemingly congealed communities could operate within similar processes, procedures, and expectations. It may seem easier just to add people (as this too would scale-up the program), but this would likely compromise the effectiveness of a group with less than efficient communications and levels of deep engagement. In this case, bigger would likely not be better; more effective groups could be the key.

To sustain this work would take a more global view of the school culture to see that an innovation like arts integration or the KCM assimilates to the current system. Sustainability may also come with a flare of personal challenge. The two innovations just mentioned would represent very different approaches for most of the teachers in the district - it may disturb a few people. If an innovation disrupts rather than just “fits in” (as assimilation might portray) perhaps it has an opportunity to open the eyes of those around it for the better, allowing the teachers, rather than the leaders, to carry the innovation out. This is not derelict in any way as most people have faced great change in a moment of being disturbed to disrupted by one of “life’s little moments.” Social artist need to balance assimilation and disruption. I believe that disruption is also attached to purposeful teacher action. Without it, the disruption becomes an edict rather than a solution worth expanding and developing.

In terms of the intervention, specifically, a further inquiry in different contexts would be of value, especially in the case of distance. To explore whether this intervention would work better, for example, on a district level rather than a

school level, eliminating the factor of convenient closeness, would be of interest.

It too may open up conversations about building a strong culture of teachers who are connected by square miles rather than footsteps across campus.

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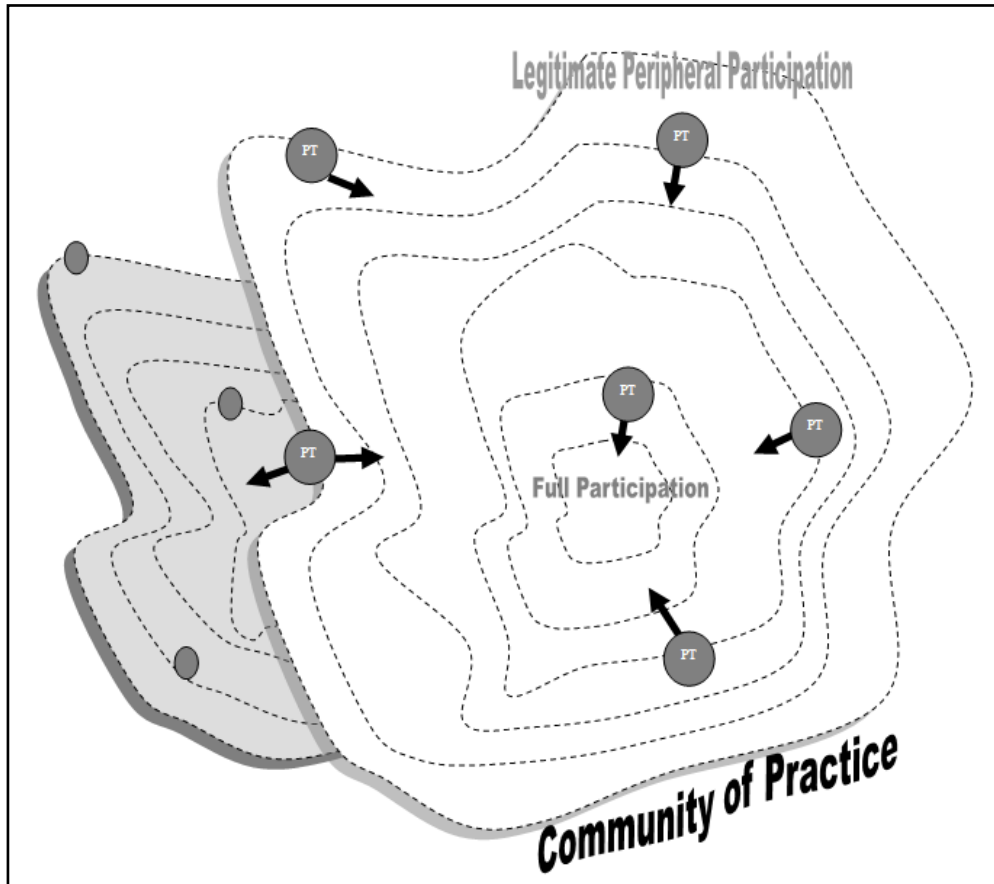
APPENDIX A  
NON-OBJECTIVE SCULPTURE



An example of a Non-Objective sculpture displaying positive and negative spaces. John Henry (1943- ) *Blue Rhapsody*, 1998, aluminum, 8 x 7 x 4ft. Retrieved from [http://www.broadbentgallery.com/exhib/exhib\\_henry.htm](http://www.broadbentgallery.com/exhib/exhib_henry.htm)

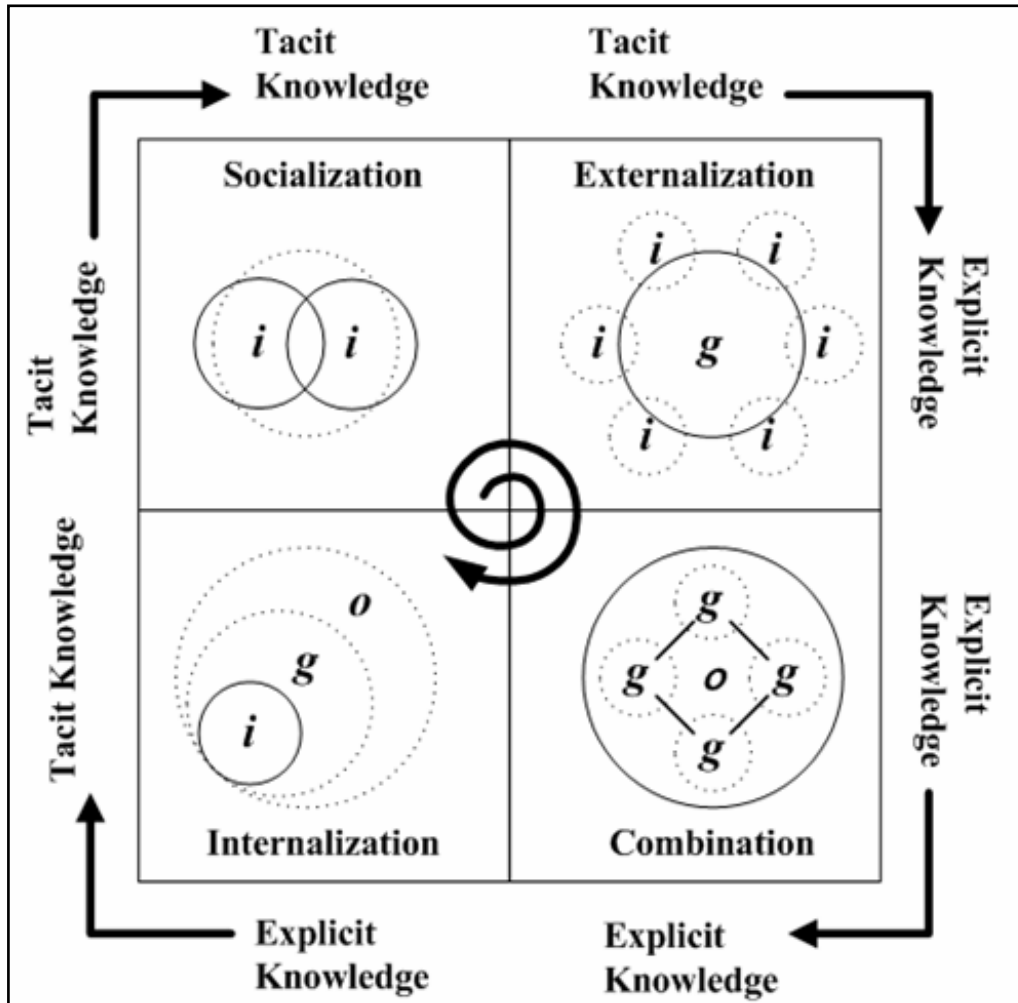
## APPENDIX B

### REPRESENTATION OF A COMMUNITY OF PRACTICE



My conceptualization of a CoP. By no means is this a representation based in any Wenger or Lave literature. But by description of the authors, I have conceptualized a two dimensional model. The authors claim that a community has no, one, single boundary; this is represented in dotted lines. A CoP is fluid and changing; represented in an organic non-geometric shape. People can belong to more than one CoP; notice an overlap of communities where a participating teacher (PT) may be on the periphery in one community, however, they may be central in another. Community members participate as an inbound trajectory towards full participation or a “master status” or “full practitioner.”

APPENDIX C  
THE SECI MODEL

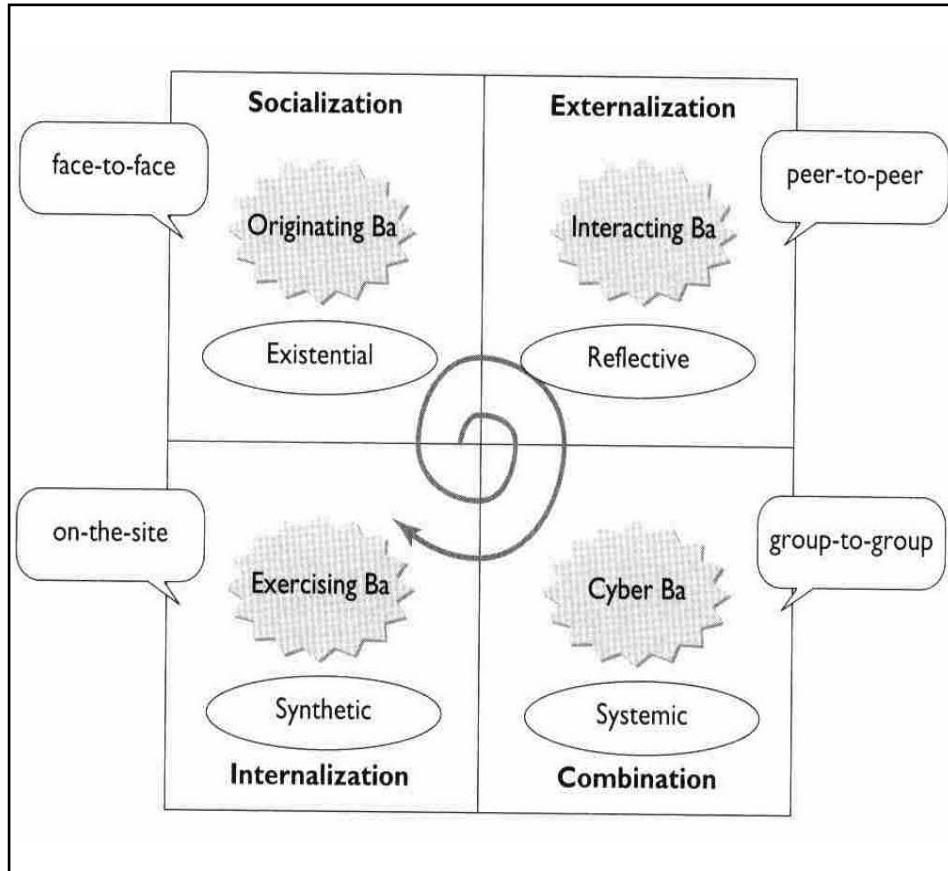


SECI model displaying the conversion of tacit knowledge to explicit knowledge. Nonaka, I., Toyama, R., Konno, N. (2000). SECI, Ba and Leadership: A Unified Model of Dynamic Knowledge Creation. *Long Range Planning*, 33, 5-34.



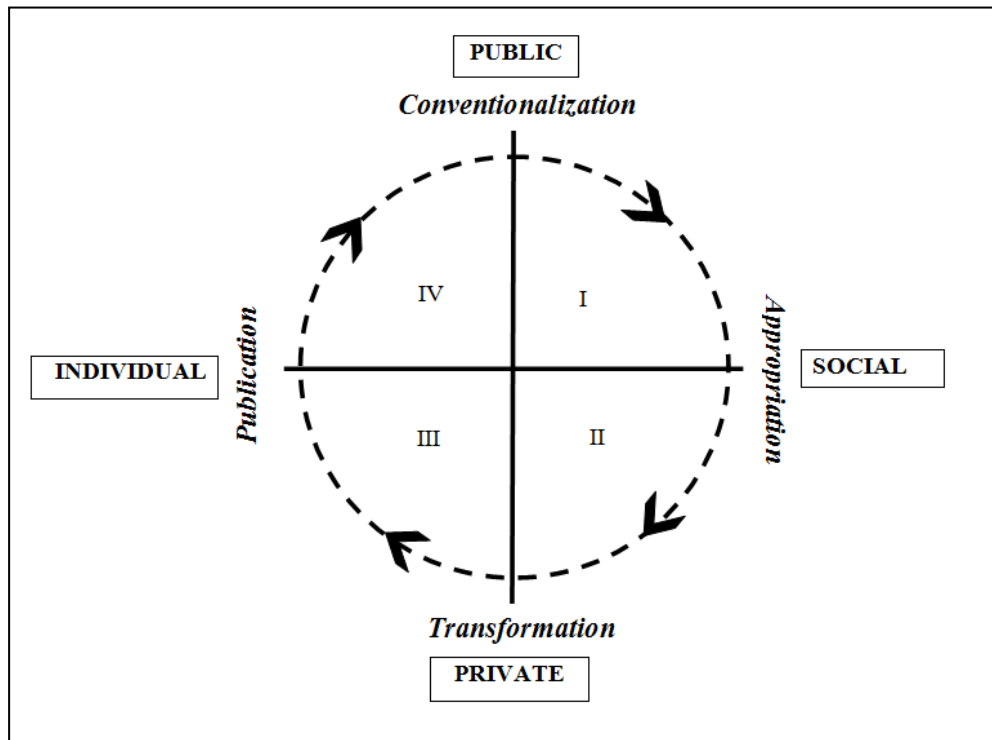
APPENDIX D

BA SPACE



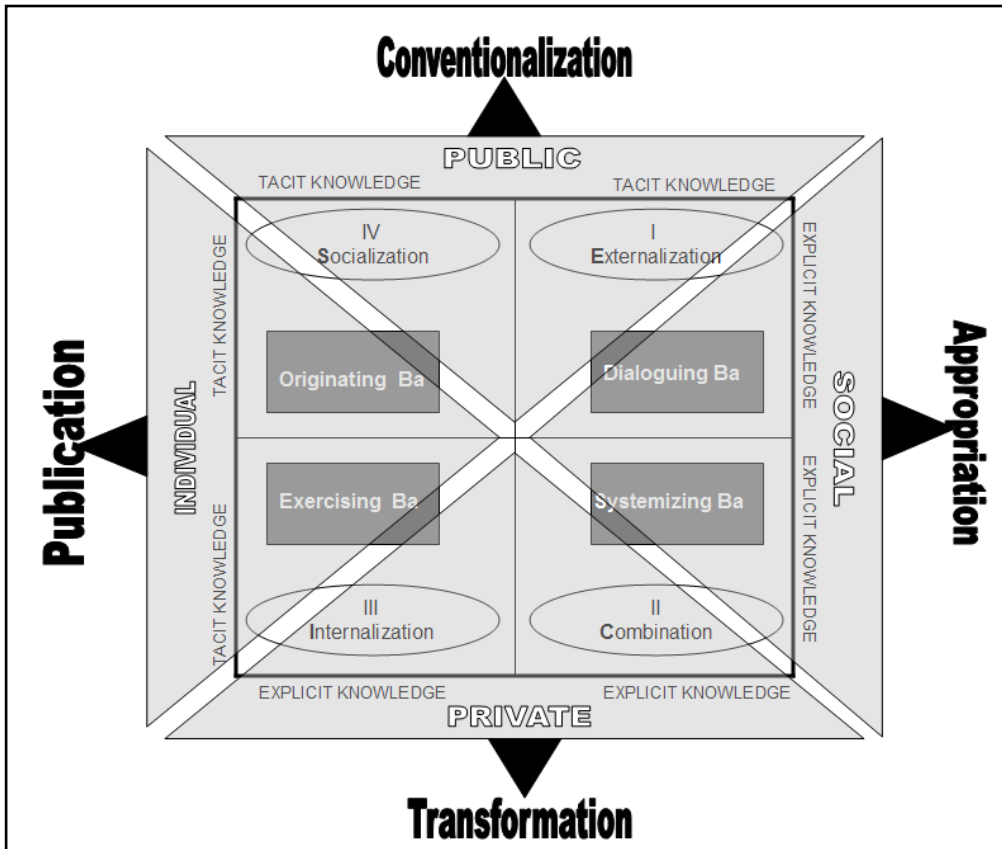
The various characteristics of Ba or space. Each represents various ways and places relationships are developed, knowledge is converted, and constructed. Nonaka, I., & Konno, N. (1998). The concept of “Ba”: Building foundation for Knowledge Creation. *California Management Review*, 40(3), 40-55.

APPENDIX E  
VYGOTSKY SPACE



The adaptation of Ron Harre's Vygotsky Space. A conceptual model representing, among several things, the power of discourse and "multiple" voices that construct knowledge. From Gavelek, J., & Raphael, T. (1996). Changing Talk About Text: New Roles for Teachers and Students. *Language Arts*, 73(3), 182-192.

APPENDIX F  
KNOWLEDGE CONSTRUCTION MODEL (KCM)



The Knowledge Construction Model which is nothing more than SECI, Ba, and Vygotsky Space models layered on top of one another. This displays where Gavelek, et al. pick up and clarified the transitions between Nonaka's quadrants.

APPENDIX G  
INTERVENTION BY QUADRANT

*Intervention by quadrant*

Quadrant		Intervention
Quadrant 1	Externalization to Appropriation	I facilitated an on-line blog utilizing on-line assistances or scaffolds for the development of deeper participant understandings of their own posted inquiries regarding arts integration ideas, classroom issues and general observations.
Quadrant 2	Combination to Transformation	I facilitated two, separate, eight hour collaborative writing sessions based on participant ideas developed in Quadrant 1. Two AIMS teachers and I collaborated with participants to articulate arts integration ideas and practices into teacher's ideas. Participants had an opportunity to create an arts integrated product to share with others.
Quadrant 3	Internalization to Publication	I would have, if time permitted, facilitated classroom sessions that would have helped participants "tighten" arts integration practices and develop product. I too would have acted as a liaison to help the participants share their product with others.
Quadrant 4	Socialization to Conceptualization	I intervened by offering teaching artists residencies for teacher observations. I also intervened by developing relationships and rapport with and among CoP members. Throughout the study, I made very attempt to ensure arts integration as a socially accepted practice at the school.



APPENDIX H  
TWELVE FORMS OF ELECTRONIC LEARNING  
MENTORING AND ASSISTANCE

*Twelve forms of electronic learning mentoring and assistance*

1	Social (and cognitive) Acknowledgement	"Hello...," "I agree with everything said so far...," "Wow, what a case," "This case certainly has provoked a lot of discussion...," "Glad you could join us..."
2.	Questioning	"What is the name of this concept...?," "Another reason for this might be...?," "An example of this is...," "In contrast to this might be...," "What else might be important here...?," "Who can tell me...?," "How might the teacher..?," "What is the real problem here...?," "How is this related to...?," "Can you justify this?"
3.	Direct Instruction	"I think in class we mentioned that...," Chapter 'X' talks about...," "Remember back to the first week of the semester when we went over 'X' which indicated that..."
4.	Modeling/Examples	"I think I solved this sort of problem once when I...," "Remember that video we saw on 'X' wherein 'Y' decided to...," "Doesn't 'X' give insight into this problem in case 'Z' when he/she said..."
5.	Feedback/Praise	"Wow, I'm impressed...," "That shows real insight into...," "Are you sure you have considered...," "Thanks for responding to 'X'...," "I have yet to see you or anyone mention..."
6.	Cognitive Task Structuring	"You know, the task asks you to do...," "Ok, as was required, you should now summarize the peer responses that you have received...," "How might the textbook authors have solved this case."
7.	Cognitive Elaborations/Explanations	"Provide more information here that explains your rationale," "Please clarify what you mean by...," "I'm just not sure what you mean by...," "Please evaluate this solution a little more carefully."
8.	Push to Explore	"You might want to write to Dr. 'XYZ' for...," "You might want to do an ERIC search on this topic...," "Perhaps there is a URL on the Web that addresses this topic..."
9.	Fostering Reflection/Self Awareness	"Restate again what the teacher did here," "How have you seen this before?," "When you took over this class, what was the first thing you did?," "Describe how your teaching philosophy will vary from this...," "How might an expert teacher handle this situation?"
10.	Encouraging Articulation/Dialogue Prompting	"What was the problem solving process the teacher faced here?," "Does anyone have a counterpoint or alternative to this situation?," "Can someone give me three good reasons why...," "It still seems like something is missing here, I just can't put my finger on it."

11. General Advice/Scaffolding/Suggestions	"If I were in her shoes, I would...," "Perhaps I would think twice about putting these kids...," "I know that I would first...," "How totally ridiculous this all is; certainly the teacher should be able to provide some..."
12. Management (via private e-mail or discussion)	"Don't just criticize....please be sincere when you respond to your peers," "If you had put your case in on time, you would have gotten more feedback." "If you do this again, we will have to take away your privileges."

Bonk, C. J., Malikowski, S., Angeli, L., & Supple, L. (1998). *Holy COW: Scaffolding case-based "Conferencing on the Web" with pre-service teachers*. Paper presented at the annual convention of the American Educational Research Association, San Diego, CA. Abstract retrieved from <http://java.cs.vt.edu/public/classes/communities/readings/Bonk-HolyCOW-2001.pdf>

APPENDIX I  
FOLLOW UP SURVEY QUESTIONS

**Follow Up Survey**

**Please write your participant ID number** \_\_\_\_\_

Question 1. Reflect on what you were thinking when you were making this product for arts integration.

Question 2. What have you done with this product since the writing session?

Question 3. In what ways, did you make this product better after the writing day? How? Did you work with anybody to make the product better?

Question 4. Have you shared this product with anybody, inside or outside the campus? If so, please explain the general context and how you presented it.

Question 5.

A- What limits, if any, have you had in your continued focus on this product.

B- What limits, if any, have you had in your sharing of this product with others.

APPENDIX J

ON-LINE SURVEY SOCIAL NETWORKING

Please answer the following questions about your experiences with social networking.

Type in your participant number in the box \_\_\_\_\_

1. How long, approximately, did it take you to complete the Blog Lab?
2. How many times did you log on to complete the Blog Lab?
3. What best describes you.? Was the Blog Lab....
  - A. Easy to use!
  - B. Not too hard...need a little practice.
  - C. I am in way over my head.
4. Do you use social networking sites like Ning, Facebook, Blogger?
  - A. Yes
  - B. No
5. Which describes your level of frequency in using web based social networking?
  - A. I don't use social networking
  - B. I have one....rarely use it.
  - C. I have one....sometimes use it.
  - D. I have one....frequently use it.
  - E. I have one....use it daily.
6. What social networking sites do you use?

**Click “finish” when you are completed!! Thanks for your input!**

APPENDIX K

PROFESSIONAL DEVELOPMENT SURVEY QUESTIONS



*Professional Development Survey organized by construct*

1.0 Collaboration	
1	In your experience, the professional development activities that you have been a part of include a purposeful gathering of people with like professional interest.
8	In your experience, teachers are vital to the articulation of professional development goals.
15	In your experience, teaching and learning goals depend on teachers being able to collaborate together.
2.0 Data Decision Making	
2	In your experience, professional development is created based on current data of student performances in their course of study.
9	In your experience, professional development is created by using current data of teacher instructional practices.
16	In your experience, professional development is created by using current data of teacher articulation of the district curriculum.
3.0 Adult Learning	
3	In your experience, professional development learning has been applicable to your personal needs as a teacher.
10	In your experience, professional development learning leads to immediate use and practice of new skills, concepts and ideas in my classroom.
17	In my school, teachers have a choice as to what professional development they need.
4.0 Building Organizational Knowledge	
4	In your experience, professional development activities allow me to share my ideas so I can willingly contribute to the school/districts knowledge base.
11	I have been involved in groups of people that work together to develop (organizational products) teaching tools for other teachers to use in their classroom.
5.0 Quality Teaching	
5	In your experience, professional development activities help me develop strategies that help me teach with higher levels of student engagement.
12	In general, professional development activities focus on the professions “best practices” and are specific to your content area.
19	In your experience, professional development activities help me develop strategies that help me teach student to operate at higher levels of thinking.
6.0 Resources	
6	As a teacher, you currently use technology to expand your professional development learning.
13	As a teacher, you have places in district (virtual or physical) where you can attain appropriate and relevant information to better your daily teaching practices.
7.0 Evaluation	
7	In your experience, professional development is evaluated based on the impact it has on teacher practice.
14	In your experience, professional development is evaluated based on the impact it has on student classroom performance.

Always=5 , Frequently=4, Sometimes=3, Seldom=2, Never=1

APPENDIX L  
PRE-POST SURVEY

Please answer the following survey questions. In the past year is referring to the 2009-10 school year. Please note that after question 6. You have a “branch” in the survey depending on your yes and no answer. Thank for your time.

**TEACHER ID** \_\_\_\_\_

1. In the past year, to what degree is arts integration dialogue or shared experiences a part of your typical daily social interaction at your school?
  - 1- Never
  - 2- Seldom
  - 3- Sometimes
  - 4- Frequently
  - 5- Always
  
2. In the past year, to what degree do you dialogue with peers about the potential of new ideas for arts integration?
  - 1- Never
  - 2- Seldom
  - 3- Sometimes
  - 4- Frequently
  - 5- Always
  
3. In the past year, to what degree do you work with others to develop lesson plans, worksheets, and other products for arts integration learning?
  - 1- Never
  - 2- Seldom
  - 3- Sometimes
  - 4- Frequently
  - 5- Always
  
4. In the past year, to what degree do you share or present your lessons and ideas with other teachers within your school?
  - 1- Never
  - 2- Seldom
  - 3- Sometimes
  - 4- Frequently
  - 5- Always
  
5. In the past year, to what degree do you share or present your lessons and ideas with other teachers outside your school?
  - 1- Never
  - 2- Seldom
  - 3- Sometimes
  - 4- Frequently
  - 5- Always

APPENDIX M  
SEMI-STRUCTURED INTERVIEW QUESTIONS

*Base-Line Semi Structured Interview Questions*

Questions	
Socialization	<ul style="list-style-type: none"> <li>• Tell me how you collaborate with others on your school campus?</li> <li>• Tell me about your observations of the demonstration or professional development.</li> <li>• In what places are you most collegial on your campus?</li> <li>• Describe how this campus supports or does not support arts integration.</li> <li>• What types of relationships do you develop in your school?</li> </ul>
Externalization	<ul style="list-style-type: none"> <li>• Tell me about your participation in the on-line blogs</li> <li>• Tell me about the responses you give to others.</li> <li>• Do you feel like relationships are being built in this virtual space?</li> <li>• Tell me about the responses you get from others. Are they helpful?</li> <li>• Tell me about the activities that the facilitator takes you through.</li> <li>• Tell me about the portal space itself</li> <li>• Is it important to dialogue about arts integration?</li> </ul>
Combination	<ul style="list-style-type: none"> <li>• Tell me about the group writing session you are participating in.</li> <li>• How do you feel about collaborating with your small group?</li> <li>• How have you been involved in the creation of arts integration lesson plans, literature, media or documentation?</li> <li>• Tell me about the space/place we operate the lesson share activities in.</li> <li>• Tell me about your arts integration product.</li> </ul>
Internalization	<ul style="list-style-type: none"> <li>• What are you doing to refine your product?</li> <li>• Have you tried the work with your kids? How did it go?</li> <li>• To what level were you able to replicate the integration work in the lesson plans?</li> <li>• Did the lesson have an impact on the learning of the child? How do you know?</li> <li>• Have your peers been receptive of your work.</li> <li>• Do you ever hear anybody talk about your product in passing?</li> </ul>
Arts Integration	<ul style="list-style-type: none"> <li>• How is arts integration going?</li> </ul>
Collaboration	<ul style="list-style-type: none"> <li>• How are the collaborations going with your peers?</li> </ul>

APPENDIX N  
FOCUS GROUP INTERVIEW QUESTIONS

## Focus Group Interview Questions

Question 1- I want you to think about the word “participation”. In what ways did this community of practice idea affect your participation in regards to activities based around arts integration?

Question 2- Think about these two words... “professional development”. In what ways did this community of practice affect your professional learning of arts integration?

Question 3- Think about the words “discussion” and “dialogue.” In what ways does this community of practice affect your discussions, virtual or face to face, about arts integrations?

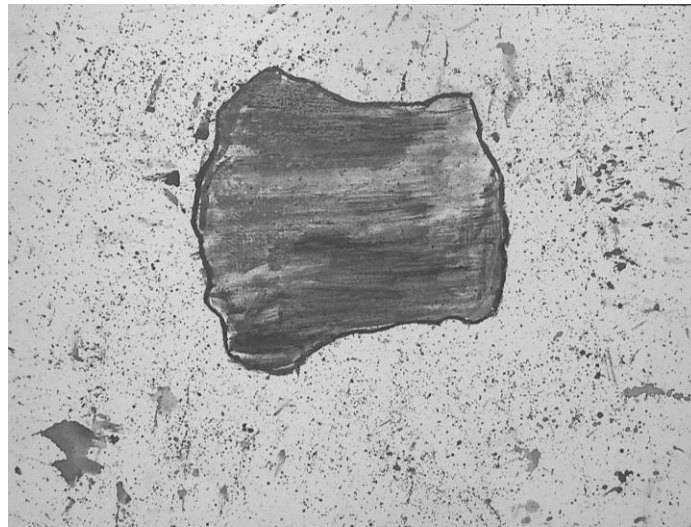
Question 4- What would make this process better for the future?

APPENDIX O

STUDENT SAMPLE ART WORK

ART AND SCIENCE INTEGRATION





TOP: A student picture of granite. This is an intrusive igneous rock. In the picture students had to show the slow cooling process which results in a rough or coarse texture and visible crystals.

BOTTOM: A student picture of schist. This is a metamorphic rock. In the picture the students had to show a rock that is formed through intense heat and pressure. The characteristics are the metallic sheen and the alignment of the crystals in foliation.

On both, students used vocabulary and observations to create their understanding of these rocks and their qualities.

APPENDIX P  
IRB APPROVAL FORM

To: Audrey Beardsley  
FAB

for From: Mark Roosa, Chair JM  
Soc Beh IRB

Date: 06/17/2010

Committee Action: Exemption Granted

IRB Action Date: 06/17/2010

IRB Protocol #: 1006005227

Study Title: Supporting and fostering Collaboration within a community of practice around the pedagogy of :

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(1)(2) .

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.