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Arts Integration Professional Development: the Higher Order Thinking (HOT) Schools approach

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**ARTS INTEGRATION PROFESSIONAL DEVELOPMENT:
THE HIGHER ORDER THINKING (HOT) SCHOOLS APPROACH**

by

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ABSTRACT

The arts have the power to expand cognitive potential through the development of higher order thinking skills, the use of the imagination, forms of self-expression and pathways to self-knowledge. When teachers are educated to integrate the arts in their classrooms, the result is transformation of the learning environment. In this qualitative case study I examined teacher experience in the Higher Order Thinking (HOT) Schools Arts Integration (AI) Professional Development (PD) program. While my research was informed primarily from the perspectives of arts specialist teachers, classroom teachers, and teaching artists, it also includes the voices of other stakeholders in the HOT educational community including administrators, HOT program directors, and parents. I obtained data through questionnaires, interviews, and observations in which I documented teacher experience during various forms of HOT AI PD and their implementation in the classroom.

Teachers reported professional growth and described how HOT AI PD had transformed their teaching practice. This was accomplished through experiential and ongoing PD that teachers found inspiring and relevant to their teaching. The various forms of PD included a weeklong residential summer institute with professional teaching

artists and various presenters, weekend mini-institutes to reinforce the summer institute content and to share best practices, administrator PD, and various one-day events on different topics. The HOT Schools program is a supportive network providing help and guidance throughout the school year.

Emergent themes were related to teacher benefits, student benefits, PD strategies, and community. Teachers expressed satisfaction with hands-on PD strategies focused on student-centered learning, with emphasis on process rather than product, encouraging deep learning through the arts. Participants' narratives highlighted the effectiveness of PD strategies utilizing teachers as instructors for their peers, and collaborative residencies with professional teaching artists in the schools.

Teachers enjoyed enhanced collegiality resulting from collaborative work when creating arts-integrated curricula, and arts specialists teachers appreciated the respect they received from classroom teachers who recognized the value of the arts as modes of inquiry. Teachers demonstrated enthusiasm for the program and expressed how they had experienced professional renewal and satisfaction in their teaching as a result of their participation in HOT AI PD.

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Chapter One: Introduction

The topic of this study is Arts Integration Professional Development: The Higher Order Thinking (HOT) Schools Approach. In this study I documented and examined the experiences of educators who participated in various forms of HOT arts integration (AI) professional development (PD). The HOT Schools PD program, established in 1994, was chosen as the focus of this case study due to its comprehensive approach, educational philosophy, theoretical foundations, and longevity in serving schools in Connecticut, where the program is based. The HOT program incorporates three core components that combine to stimulate whole-school reform: Strong Arts, Arts Integration and Democratic Practice. The AI PD offered through the HOT program is ongoing and takes many forms tailored to meet the needs of teachers and also includes other members of the school community, including teaching artists, administrators, and parents.

In order to justify the need for this study, it is useful to first consider arts integration and its significance in education. AI has been defined as "...the investigation of curricular content through artistic explorations. In this process, the arts provide an avenue for rigorous investigation, representation, expression, and reflection of both curricular content and the art form itself" (Donovan & Pascale, 2004, p. 14). AI, therefore, brings the arts from the margins to the center of the school curriculum, and is important to study as evidence shows that arts integration can open new pathways of learning for students, particularly those who are at risk, have special needs, or are English language learners (Brown, Benedett, & Armistead, 2010; Burnaford, Aprill, & Weiss, 2009; Catterall, 2009; Gallas, 1994; Goldberg, 2004; Miller, 2011; Stevenson & Deasy,

2005). While AI holds promise for these learners, a barrier to implementing arts integration programs in the schools has been adequate teacher professional development for both teachers of the arts and of other subjects. Successful arts integration programs provide AI PD that prepares teachers to become facilitators of learning, in which students take active roles and are deeply engaged. It also creates bridges of knowledge and practice between the disciplines, so that teachers are better able to implement an integrated curriculum. To better understand the benefits and challenges of AI PD, I focused primarily upon teachers' experiences as they journeyed toward creating an arts integration learning environment for students. In the pages that follow, I will demonstrate how they experienced professional growth and renewal specifically through participation in HOT AI PD.

Research Problem

Arts integration is becoming more common in the US as an intervention strategy for schools in low-income communities and others that have a high number of at-risk learners (Brown et al., 2010; Munoz, Ross, & MacDonald, 2007; Snyder, Klos, & Grey-Hawkins, 2014; Stevens, 2016a). While an arts integration curriculum has been demonstrated to be a successful strategy (Burnaford et al., 2009; Donovan & Pascale, 2004; Jalongo & Stamp, 1997), it is common for arts specialists, classroom teachers, and administrators to lack the experience and appropriate PD to implement AI curriculums because it was not included in their pre-service education or their own educational experiences (Donovan & Pascale, 2004). Therefore, for AI programs to be successful in terms of their aims, PD for teachers and administrators is one of the key components that

must be addressed (Garrett, 2010; Snyder et al., 2014).

To better understand effective AI PD, it was important to identify an established program that provided quality learning opportunities for arts specialists, classroom teachers, and administrators. The Higher Order Thinking (HOT) Schools program in Connecticut was identified as a model program, and was therefore chosen as the intrinsic case for this study. The HOT Schools AI PD program includes an annual summer institute, an annual orientation day at an established HOT School, peer partner days, weekend residential mini-institutes, convenings (meetings), and teacher-artist collaborations (Koba, 2015a). These ongoing forms of PD were attended by all stakeholders in the educational community: arts specialist teachers, classroom teachers, professional teaching artists, administrators, and parents. These various forms of HOT Schools professional development and the participants who attended them comprise the bounded system for this case study.

The HOT Schools Approach: A Model of AI Instruction

The Higher Order Thinking (HOT) Schools program was established in 1994 in Connecticut with the mission statement, “Higher order thinking skills inspire lifelong learning in, about, and through the arts in a democratic community celebrating each child’s unique voice” (Koba, 2015a, p. 2). At the time of this study, the HOT approach was used in over 42 Connecticut schools and had been adopted nationwide by schools, arts organizations, and individual teaching artists (Koba, 2014a). With the establishment of HOT schools, the state of Connecticut created an effective program that fulfilled a recognized need in education, which was to reach a wide variety of learners (Catterall,

2009; Greene, 1995).

The HOT Schools' educational philosophy and approach was based on the theories of Benjamin Bloom (1995), Joseph Renzulli (2014), John Dewey (1916), and Howard Gardner (1983). The theories and their applications in the HOT program are described below and are also discussed within the context of the findings in Chapter Seven. In schools that have implemented the HOT approach, the arts disciplines were taught as rigorous academic subjects and integrated with other subjects across the curriculum. Teachers worked collaboratively with one another to create the integrated curriculum with the aim of promoting higher order thinking skills, creativity, leadership, and teamwork in a democratic setting (Koba, 2014a; Stevens, 2016a).

The HOT Schools program fosters the development and practice of higher level thinking skills through three core components: strong arts, arts integration, and democratic practice. Following is an overview of these components, to be covered in more detail in Chapters Six and Seven. Brief descriptions are included here to introduce the educational philosophy and foundation of the HOT Schools approach on which the program is constructed.

Strong Arts. In HOT Schools, the arts disciplines are taught as rigorous academic subjects, each with its own sequential curriculum. The arts are taught from the perspective that each has its own unique form of knowledge not found in other academic disciplines. The HOT Schools philosophy maintains that “strong arts programs foster the development of higher-order thinking skills, independent judgment, and creative

problem-solving. They provide stimulating vehicles for students to communicate their ideas” (Koba, 2015a).

Arts Integration. Teachers work collaboratively to create the integrated curriculum with the aim of promoting higher order thinking skills, creativity, leadership, and teamwork in a democratic setting (Koba, 2015a). The HOT program sought to ensure quality integration through professional teaching artist residencies at the schools and also provided coaching by experienced HOT teachers. The arts are integrated across all the disciplines to create what was described as an “arts-rich” or “arts-infused” (Koba, 2015a, p. 4) environment where learning in all subjects is reinforced “by empowering students to make connections and synthesize relationships among ideas” (Koba, 2015a, p. 12).

Democratic Practice. The third core component of the HOT Schools program was inspired by the educational theory of John Dewey (1916) who asserted that schools should practice democratic ideals in order to prepare students for life beyond formal schooling. In HOT schools, students are given opportunities to serve the community in the democratic student senate and student literary and art boards. The building of a caring and supportive community is an important aspect of the HOT Schools philosophy, and this is accomplished through inclusive PD extended to parents as well as school staff. Dewey’s democratic ideals are discussed in more detail under the following section on theoretical foundations.

Theoretical Foundations of the HOT Schools Program

Following are descriptions of the four theories that serve as the foundation for the educational philosophy and teaching practices advocated by the HOT school organization. Examples are provided that illustrate the ways in which these theories are put into practice for AI instruction and teacher PD.

Bloom's Taxonomy. Benjamin Bloom's original taxonomy of six levels of higher order thinking (knowledge, comprehension, application, analysis, synthesis, and evaluation) was based on assessment of student outcomes (Bloom, 1956). The revised taxonomy (remember, understand, apply, analyze, evaluate, and create) has shifted the emphasis from assessment within the isolated areas listed above to the planning of curriculum, instruction, assessment and their interconnectedness (Anderson & Krathwohl, 2001). The HOT Schools approach follows the new taxonomy and creates curriculum and assessment strategies that "engage students in inquiry, investigation, and hands-on experiential learning. By integrating the creative and critical dimensions of the arts processes with other core curriculum, HOT Schools educators design instruction that challenges students to develop and use higher-order thinking skills, gain a multi-dimensional understanding, and become actively engaged in their learning" (Koba, 2015a, p. 8).

Renzulli's enrichment models. As professor of Gifted Education and Talent Development at the University of Connecticut, and Director of the National Research Center on the Gifted and Talented, Joseph Renzulli has guided HOT Schools educators with two enrichment models for employing higher order thinking skills in the classroom.

His “School-Wide Enrichment” and “Enrichment Triad” models are aimed at providing all students with intellectual challenges (Renzulli & Reis, 2014). The aim of this enrichment model is to have students assume the roles of professional investigators. “They should become producers of knowledge rather than consumers, actively formulating a problem, designing research, and selecting appropriate audiences for their final product” (Koba, 2015a, p. 9). HOTS schools schedule these activities over a period of several weeks, where students and teachers engage in “arts and arts-integrated projects related to a broad, common theme. Students are involved in designing, experimenting, comparing, analyzing, recording and classifying. Skills developed include creative and critical thinking and communicating effectively. Students become investigators and solvers of real problems” (Koba, 2015a, p. 9). An example of this enrichment activity was given by the HOTS Schools literature as follows:

During an 18-day Teacher-Artist Collaboration, fifth-grade students...learned science concepts in a unit dramatizing life in ancient Egypt. Using shadow puppetry, students studied reflection and refraction of light. They made and tested hypotheses and recorded their observations, Shadow puppetry helped make these abstract concepts concrete. Students also learned script-writing techniques while developing life-size portrait murals depicting themselves as Egyptian characters. Through the creative process, they synthesized ideas; became producers, researchers, and designers, and actively engaged in their learning (Koba, 2015a, p. 9).

Dewey's democratic ideals. The HOT Schools philosophy of Democratic Practice draws on Dewey's two works "School and Society" (1915) and "Democracy and Education" (1916), in which Dewey wrote about democratic ideals and their practice in education. He held that the schools were an extension of our society and, as such, should prepare students to function within a democratic community. Dewey also believed that education should be connected to the real world and foster leadership skills and respect for the ideas of others. Student government is a hallmark of the HOT Schools philosophy, which states "democracy and arts are inextricably linked" (2015a, p. 6) as both involve expression and active participation. The Student Senate fosters leadership skills, where students participate in the democratic process to reflect on students' needs and concerns and make decisions for the good of the school community. An example of Dewey's theory in practice is described below, where students worked creatively to solve bullying issues at their school:

While working with a theater artist in a social studies class, fourth-and fifth-grade Student Senate representatives...decided it would be effective to address recent bullying issues (at recess and on busses) through the theater techniques they were learning. The Student Senate advisor guided students through the process. Students worked with the school psychologist, social worker, and theater artists to research strategies and develop solutions with the school community at Town Meeting. The student-driven concept for addressing bullying issues in this manner is a legacy that will be left from one student body to another (Koba, 2015a, p. 10).

Gardner's Theory of Multiple Intelligences. Howard Gardner's Theory of Multiple Intelligences (1983) provided a framework for the HOT schools approach to teaching and learning in which students' different strengths and ways of processing information were recognized, and the value of the intelligences were regarded as a broader range of student potential than could be determined through standard I.Q. testing (Koba, 2015a). With this view in mind, the HOT Schools PD aimed to provide teachers "with the skills to plan and deliver instruction focused on content mastery and successful outcomes that all students can learn, is challenging for all students, and balances rigor and joy" (Koba, 2015a, p. 11). To accomplish this goal for all students, the HOT Schools approach used the multiple intelligences as modes of presentation or entry points for lesson content. The example below illustrates not only the application of Gardner's theory by a science teacher, but also the involvement of the principal as a direct result of HOT Schools' PD program that includes administrators as well as teachers.

A bodily kinesthetic fourth grader from Pleasant Valley HOT School, struggling but determined to understand a science concept, independently created a dance to help her understand the interactive functions of red and white blood cells as a body fights infection. Delighted with her success, the student approached her principal for help in selecting the perfect musical score. Presenting her idea to the class helped increase the understanding for other kids struggling with the same concept. With encouragement from her teacher and her principal, this fourth grade child choreographed a dance to illustrate a science concept, which her entire class performed at Town Meeting (Koba, 2015a, p. 11).

Professional Development in the Public Schools

The professional development offered to educators often falls short of providing teachers with effective instructional tools. This may be especially the case for educators working with multicultural students and diverse learners, who benefit most from AI instruction (Brown et al., 2010; California State University at San Marcos, 2014; Goldberg, 1997). Due to limitations of time, scheduling, resources, and the fulfillment of state certification requirements, there is little opportunity for teachers to participate in quality on-site professional development during contracted time.

PD offered by district administration is aimed primarily at helping classroom teachers meet district and state initiatives. Although these sessions are necessary and helpful within this context, they are often not relevant to specialist teachers and there is little opportunity for hands-on application of new classroom strategies or collaborative planning. For example, a Pennsylvania public school district in-service agenda for August 2014 contains the following activities in preparation for the start of the new school year:

- Day 1: AM: Convocation for all staff, followed by TAC training (Teacher Access Center, the district's grading software). PM: Teacher preparation time: classroom set-up, planning, etc.
- Day 2: AM & PM: Teacher preparation.
- Day 3: AM: Building time: OASYS & SLO training (online assessment system and student learning objectives)

- Day 4: AM: Curriculum planning, by department. PM: Building time activities as designated by building principals (McKay, 2014).

As seen in the above schedule, the morning session is designated for curriculum design by department, including the special areas. Teachers are expected to work on curricular goals, with specific guidelines as set forth by the curriculum coordinators. This is a typical scenario, in which PD time and resources are devoted primarily to district initiatives, topics not explicitly related to instruction in the arts. Teachers frequently engage in more relevant PD outside of their contracted time. In order to establish AI instruction, time is needed for collaborative PD where teachers of all subjects may work together to plan instruction with the arts across the curriculum.

In addition to the lack of quality PD available for in-service educators, most arts specialists and generalist classroom teachers enter the profession without any coursework in arts integration. For example, undergraduate course schedules in southeastern Pennsylvania state and private universities offer applied music and education methods courses with few electives and no courses in AI (Millersville University, 2014; Temple University, 2014). Furthermore, only seven states have adopted AI standards at the college or university level for students majoring in education, although an AI course is not required for certification: Arizona, Idaho, Illinois, Indiana, Kentucky (also high school level), Louisiana, and New Mexico (Burnaford, Brown, Doherty, & McLaughlin, 2007). For example, the Arizona standards are delineated as follows:

- Creating Art: Students know and apply the arts disciplines, techniques, and processes to communicate in original or interpretive work.

- Art in Context: Students demonstrate how interrelated influence and give meaning to the development and reception of thoughts, ideas, and concepts in the arts.
- Art as Inquiry: Students demonstrate how the arts reveal universal concepts and themes. (Burnaford et al., 2007, p. 9)

The adoption of AI standards by the above states indicates recognition of the value of the arts in student learning and by inference, the value of related PD. The absence of these standards in most states highlights the need for the teacher PD that would empower teachers to create and implement integrated arts curricula.

Why Teachers Need AI Professional Development

Why is quality AI PD important for teachers? In the words of Ken Robinson, “...the real key to transforming education is the quality of teaching. More than class size, social class, the physical environment, and other factors, the heart of educational improvement is inspiring students to learn...” Since the arts inspire and engage students in learning, the results of AI can be significant in terms of academic achievement as well as student growth in socialization skills and behaviors (Burnaford et al., 2009; Catterall & Waldorf, 1999; Donovan & Pascale, 2004; Snyder et al., 2014; Stevens, 2016a; Stevenson & Deasy, 2005).

Because few teachers have had pre- or post-service training in AI, PD is needed to help teachers acquire AI strategies to employ novel modes of inquiry that enhance student learning. Of basic importance to this study is the evidence from prior research that students in schools where the arts are integrated with other subjects may make more

cognitive connections than students in programs where the arts are less emphasized and not integrated with other subjects (Bresler, 1995; Brown et al., 2010; Burnaford et al., 2009; Efland, 2002; Eisner, 2002). AI instruction inspires students with creative, project-based learning, utilizing higher order thinking skills to arrive at unexpected solutions, and offers clearer understandings for diverse learners (Bresler, 1995; Brown, Sax, & Kacey, 2012; Garrett, 2010; Goldberg, 2004; Stevenson & Deasy, 2005; Venzen, 2011). Teachers who have participated in effective AI PD will be better prepared to successfully implement and sustain quality AI programs in the schools (Garrett, 2010; Hallmark, 2011; Patteson, 2005; Saraniero, Goldberg, & Hall, 2014; Stevenson & Deasy, 2005).

HOT Schools: A Model of AI Professional Development

I work with artists, arts educators, and organizations around the country, and the work in Connecticut's HOT schools is among the best done anywhere. Their approach, expertise, and team of skilled practitioners provide leadership that is ready to transform the learning in many more schools, within the state and across the states. – Eric Booth, Julliard faculty member, author, national consultant, and arts education advocate (Koba, 2015a, p. 4).

Professional development is considered the core of the HOT Schools program, and utilizes multiple strategies to engage teachers, arts educators, administrators, teaching artists, and parents. The HOT network provides AI PD to classroom teachers, teaching artists, administrators, parents, and arts organization educators with the aim of helping them improve arts education, create arts integration programs, promote school culture change, and student leadership development (Koba, 2014a). The arts are the cornerstone

of the HOT program, which maintains that strong arts education and arts integration both help develop higher order thinking skills.

PD is offered in several forms: an annual week-long summer institute, a 2–3 day mini-institute, one-day workshops known as “leadershops” and “peer partner days” (Koba, 2014a, p. 4), and sessions for convening, focus, and discussions. The week-long, residential summer institute is the most well-known aspect of HOT PD, and includes activities described by HOT as “renowned speakers, seminars, workshops, sequential learning tracks, interactive demonstrations and performances” (2014a, p. 4).

This program also offers professional development strategies aimed specifically toward students to reinforce the HOT approach in active learning, independence, and responsibility to the community. For example, a town meeting is held periodically as a forum where student learning is showcased in order to demonstrate “learning-in-progress” (2014a, p. 5) to parents, board of education members and the larger community. Students take active roles in writing or planning the presentations, which utilize a variety of artistic approaches such as theater, dance, music, poetry reading, or visual art.

Enhanced Curricular HOT Opportunities (ECHOs) are student driven activities in which students “apply advanced content and methods to develop products and services that have an impact on intended audiences” (2014a, p. 6). Another example is the “Magic Mailbox,” a repository where students may submit what they consider to be their best efforts in creative writing, visual art, songwriting, composition and other work. The work is peer-reviewed and items are selected to be showcased at the town hall meetings

or other venues where student work is shared with the larger community. Literary and art boards provide additional platforms for student leadership, where students develop criteria for the review of writing and artwork submitted to the Magic Mailbox.

The HOT School Program as a Choice of Study

The HOT Schools program was chosen as the object of this study due to its multi-level, varied, adaptable, ongoing AI professional development. The practice of involving all members of the educational community in the ongoing professional development process ensures successful transitions and continuity for schools. The program was also chosen for its multifaceted theoretical foundation encompassing the four educational theories stated above. Although similar to other AI professional development programs that will be described in Chapter Two, by comparison the HOT Schools approach shows evidence of meticulous theoretical research and its applications, and varied, effective, ongoing professional development.

Purpose of the Study

The purpose of this case study was to examine the process of AI PD as experienced by teachers in the Higher Order Thinking (HOT) Schools Program in order to better understand the aims of the HOT program and the experiences of teachers who participated in the program. To do so, it was appropriate to assume a stance that drew specifically upon Robert Stake's approach to case study methodology that utilizes "naturalistic, holistic, ethnographic, phenomenological, and biographic research methods" (1995, p. xi). According to Stake, the purpose of case study research is to

examine “the particularity and complexity of a single case, coming to understand its activity within important circumstances” (1995, p. xi). The use of an intrinsic case study approach in observing the HOT program provided a framework through which I gained a fresh phenomenological perspective while taking into consideration the views of teachers in order to understand the HOT AI PD program.

This study also utilized interpretive and constructivist approaches in accordance with Stake’s description of the central role of the researcher as “interpreter, and gatherer of interpretations...” (1995, p. 99). I identified the emergent themes and issues of this case based on my interpretations of teacher narratives and observations of PD activities. I then applied these interpretations to construct a view of the HOT Schools AI PD program and the overall experiences of program participants.

The understanding of this case is further informed by the theories that support AI within the field of education as presented in Chapter Three. This theoretical foundation for AI draws on the work of John Dewey (1934, 1938); Arthur Efland (2002), and Elliott Eisner (2002) with regard to the intertwining of aesthetic and intellectual experience, and the cognitive benefits of arts study. The theoretical discussion will also seek to clarify the relevance of Howard Gardner’s Theory of Multiple Intelligences (1983) to AI practice. This is important as HOT Schools have incorporated the educational theories of John Dewey, Howard Gardner, Benjamin Bloom, and Joseph Renzulli into the program’s stated theoretical framework. An examination of these theories may provide a deeper understanding of the program’s goals and objectives in the design and implementation of PD for teachers and other stakeholders of the HOT Schools program in order to

effectively deliver AI curricula to students.

The bounded system of this case study was the HOT Schools PD program. It included the teachers, administrators, professional teaching artists, workshop presenters, and parents who participated in the 2015 HOT Schools Summer Institute in Hartford Connecticut, the 2015 HOT Schools Orientation Day, a “Leadership” (a form of PD at the John Lyman School in Middlefield, Connecticut), as well as other forms of ongoing PD. In this study I examined the perspectives of the participants regarding the effectiveness of HOT PD in relation to professional growth and the teaching environment. The study also included the perspectives of participants who had various roles in the program other than teaching: HOT Schools directors and other administrators, teaching artists, school administrators, professors, PD presenters, and parents. The aim of the study was to provide a knowledge base from which teachers could envision, plan, and engage in pathways to transform the teaching and learning experience in their unique school environments through effective AI PD. Through this study I sought to discover the extent to which the HOT Schools PD program met its stated mission and goals from the perspectives of the above-mentioned participants.

In this dissertation I elucidated key elements that produce successful, sustainable AI PD as exemplified by the HOT Schools approach. HOT Schools are exemplars of quality AI instruction because they provide ongoing, sustainable PD for all members of the educational community: teachers, administrators, and parents. The HOT School approach was worthy of close examination as it provided organizational structures to support ongoing AI PD in unique school settings, where the approach could be

customized to suit the needs of each educational community.

According to the HOT program leadership, the specific purpose of HOT AI PD is to improve instruction to reach a diverse student population with many needs and interests, and to uncover learning potential. The HOT program promotional literature described their PD approach as comprehensive, and “grounded in current research and best practices in teaching and learning” (Koba, 2015a, p. 14). Classroom teachers, arts-specialists, teaching artists, and administrators worked closely at four levels “providing inspiration and vision, developing practical skills in the three core components, building a vibrant support network and professional-learning community, and cultivating meaningful partnerships with arts and cultural institutions” (Koba, 2015a, p. 14). A close examination of the HOT Schools AI PD program may, therefore, be useful to determine key elements in teachers’ experiences to determine how these facets of the program impacted their personal and professional journeys toward change and renewal.

Research Questions

The primary research questions for this study were:

1. What are the educational philosophy, goals, and objectives of the Higher Order Thinking (HOT) Schools, and how do these relate to professional development for educators?
2. How is AI professional development carried out using the HOT Schools approach?
3. What are teachers’ experiences in the established HOT School environment?

Need for the Study

Limited research on AI PD suggests a need for further study to determine what programs are available, how they deliver instruction to teachers, and the extent to which they are successful in transforming teacher practice in developing and implementing an arts integrated curriculum (Garrett, 2010; Snyder et al., 2014). Research is also needed to help identify the organizational structures which successfully support and sustain arts integration curricula in the schools (Bresler, 1995; Garrett, 2010). Studies are needed to illuminate the AI PD process from the standpoint of teacher experience as they move through a process that involves personal and professional risk-taking (Burnaford et al., 2009; Stevenson & Deasy, 2005). Recognition of the cognitive benefits of arts study and integration may encourage teachers to seek out AI PD. This study aims to offer insights into these aspects of AI PD through examining the approaches and processes offered through the HOT schools program.

This study sought to reveal potential advantages for schools with diverse learners to adopt the HOT approach, because HOT PD focuses on strategies designed to be adaptable to unique school contexts. One of the strengths of the HOT Schools' AI PD is that it is ongoing, with many types of seminars and meetings available to teachers as described above. Another important element of the HOT school approach is that the PD is offered to administrators and parents in addition to teachers, thereby creating a support structure that includes all stakeholders in the education of students.

The HOT approach fosters collaborative work among faculty across the disciplines and a collegial support network that helps build relationships, a crucial

element in the creation of arts integrated curriculum (Burnaford et al., 2009; Koba, 2014a, 2015a). Studies have reported improved communication and collegiality as teachers work together in planning and implementing AI instruction and arts projects (Koba, 2015a; Stevenson & Deasy, 2005); and increased teacher satisfaction, renewal, and self-efficacy in reaching diverse learners through integration (Hallmark, 2011; Patteson, 2005; Stevenson & Deasy, 2005). AI PD has helped teachers acquire increased understanding of their students and greater respect for student projects (Koba, 2014a; Stevenson & Deasy, 2005). As a teaching artist explained, “I think that the arts projects bring out teachers’ understandings in different ways because if there is a student who can never sit still in class and they’re given something that engages them, suddenly the teacher understands the student more” (Stevenson & Deasy, 2005, p. 72).

In HOT Schools and other quality AI programs, teachers demonstrate respect for student ideas and creativity. In HOT schools, students develop self-esteem not only through the arts but also through democratic practice, as exemplified in the student-composed welcome song, “We all have an equal choice, to learn and share with our own voice” (Koba, 2015a). As seen in the above examples, the HOT school approach embodies the recognized characteristics of quality AI instruction, but with more extensive AI PD that includes administrators and parents, and with the added dimension of democratic practice as well.

Significance to Music Education

My motivation as a music specialist to investigate arts integration professional development grew out of a longstanding view that music was by nature an inter-

disciplinary subject. As a vocal and general music teacher in the public schools, my introduction of a new piece of music to my chorus or general music classes always included a cultural or historical perspective. I found that if I drew connections between music and other subjects, it provided meaning and relevance to student's lives. These connections were most often found in social studies, history, musical theater, dance, or visual art. When possible, I collaborated with classroom or other specialist teachers to create integrated lessons or units, but these efforts were usually met with resistance, due to curricular demands, the absence of common planning time, and what I interpreted as a view of music as a non-essential subject. It was my aim that this study demonstrate how with adequate PD, arts integration is within the grasp of all teachers, not just those who teach the arts. In the findings ahead we will see that when the arts are regarded as cognitive, essential subjects, rather than "extras" or "specials," and educators work to develop artistic sensibilities and skills, that arts specialists and generalists alike can develop tools to transform the teaching and learning environment.

Overview of the Dissertation

In this chapter I introduced the study and provided a rationale and purpose for examining teacher experience in HOT AI PD that was based on scholarly evidence and theoretical underpinnings for the cognitive role of the arts and the value of AI in education. In Chapter Two I introduce AI, its educational value and benefits, and provide definitions, styles, and terminology to create a working vocabulary in order to clarify the levels of AI practice in the schools. In the chapter I highlight the essential value of higher order thinking skills in addressing the larger goals of education, notably future

work skills, and provide context by situating the HOT Schools program among other well-established AI PD programs. In Chapter Three I offer insights on the connections between aesthetic and intellectual experience and the cognitive values of the arts as set forth in the theories of John Dewey (1916, 1934, 1938), Arthur Efland (2002), and Elliot Eisner (2002). In the discussion I consider how the arts foster the development of the imagination; expression and communication, refined habits of mind, and offer clarification on the appropriate application of Howard Gardner's Theory of Multiple Intelligences (1983; 1999) to AI practices. In Chapter Four I elucidate the research methodology that uses interpretive and constructivist approaches from a phenomenological standpoint, based on Robert Stake's (1995) design. I describe how the research was field-oriented as data was collected in several scenarios, and describe the participants, research sites, methods of data collection and analysis, and plan of work. In Chapter Five I present an overview of the processes for collecting, analyzing and organizing the findings to create a logical compilation of data. In Chapter Six I portray the emergent themes and issues through interpretation of teacher narratives and construct a view of HOT AI PD. In Chapter Seven I illustrate how the emergent themes and issues align with the research questions and how they are connected to existing literature. I then offer assertions based upon the analysis and grouping of themes and issues and arrive at one overarching theme, that AI PD fosters job satisfaction and renewal for teachers. Following, I make suggestions for future research of the HOT Schools program in different settings. I conclude with a few final thoughts regarding how AI PD had transformed the professional lives of the teachers in this study.

Chapter Two: An Introduction to Arts Integration

What might the potential for thinking, learning and being look like for our children if, over the years, their entire education provided opportunities for them to expand, rather than narrow, their range of expressive and narrative functions? (Gallas, 1994, p. xvi).

This compelling question prompts us to consider the value of the arts as a means to educate and expand human potential. It also offers a critique, suggesting that current educational practices may often fail to do so. In seeking a solution to this problem, it would be useful to consider two additional questions: what are the essential goals of education, and how can educators reach students effectively through the arts to achieve these goals?

In this chapter I introduce the practice of AI and its value in meeting educational objectives, including the overarching goal of preparing children for life beyond schooling. I then present the specific ways in which the arts help cultivate higher order thinking skills and combine to prepare students for life in the future workplace. The cognitive value of the arts, as identified by Arthur Efland (2002), is elucidated to further emphasize the role of the arts in fostering divergent and creative thinking skills. The discussion then turns toward integration of the arts with other subjects and the implications for education. The relationship between AI and learning is examined, including the range of student benefits in both academic and non-academic areas. I then point to the need for effective AI PD in order to productively implement integrated curricula and instruction to meet educational objectives. The various styles of AI as

identified and defined by Bresler (1995) are presented in order to provide a working vocabulary for AI in this study. I offer a rationale for a case study of successful AI PD through the Higher Order Thinking (HOT) Schools program, which may provide insights for educators who are considering implementation of similar AI programs. In order to situate HOT Schools among existing programs, examples of established AI programs are introduced, followed by available AI PD programs.

The Value of the Arts in Education

The value of the arts in education has received increased attention over the past 20 years, yet there are circumstances in education today that threaten the existence of arts programs in the public schools. Two situations that have had a negative impact on the arts are the increased financial restrictions in today's economic climate, which has resulted in the decrease or elimination of arts programs in many school districts. The second negative influence is the current emphasis on standardized testing, prompted by the enforcement of the No Child Left Behind (NCLB) Act of 2002 (Robinson, 2011; The 107th Congress of the United States, 2002). Testing and writing have long been the principal modes of assessment in the public schools (Elliott, 2002; Gardner, 2008; Goldberg, 1997; Greene, 1995), a situation exacerbated by NCLB. Both of these scenarios have contributed to the marginalization of the arts in the schools. It appears that the focus of education has not changed significantly since Maxine Greene observed, "Standards, assessment, outcomes, and achievement: these concepts are the currency of educational discussion today" (1995, p. 9). Due to the current emphasis on standardized testing, schools are largely focused on teaching basic competencies rather than

interpretive learning. Carl Bereiter's assessment of education led him to the conclusion that schools are able to teach basic skills, but that interpretive learning was "largely beyond our reach" (Stake, Bresler, & Mabry, 1991, p. 13). This prompts a question: Can arts integration (AI) help to improve interpretive learning in the schools and thereby remedy the inequity in educational practice? What type of professional development (PD) is needed to enable teachers to improve learning through AI?

How the arts help children prepare for the future. In considering the value of the arts and arts integration in education, it may be instructive to contemplate the broad range of outcomes attributed to arts study. The arts address the larger goals of education in preparing students for functioning in the post-modern world. The skills fostered by arts study include the abilities to think divergently and creatively, to work collaboratively, and to promote multicultural understanding. In this section I discuss these and other skills that will likely be needed in the 21st century workplace, most of which are directly affected by arts study. I also discuss how the traditional and cultural attitudes toward arts study as relevant only for arts-related professional goals or recreational purposes, are being challenged by AI approaches to education.

One possible outcome of arts instruction is that it has the potential to engage the imagination, whether in music, visual art, dance, or drama. Maxine Greene recognized that the imagination is a key element in the learning process, and concurred with John Dewey's view of the imagination as a mental process that helps learners form connections between old and new learning experiences (Greene, 1995, p. 20). Similarly, Efland stated that the imagination enables learners to form mental images of what is "not

actually present to the senses” and allows learners to create “new ideas or images through the combination and reorganization of previous experiences” (2002, p. 133).

Because the arts have the potential to foster imagination and creativity, they may support the development of divergent thinking skills. As Karen Gallas (1994) points out, children have a natural tendency to think divergently, but unfortunately, the schools do not foster this way of thinking. Through arts study and arts integration, children are given opportunities to think creatively or divergently, and consider more than one solution to a problem. There is no single solution to creating an expressive work of art - rather, there is more than one “right” answer. Similarly, Ken Robinson has defined divergent thinking as “being able to identify lots of possible answers to a question – to move beyond thinking in linear ways or convergently” (Donovan & Pascale, 2004, p. 161). The ability to use divergent thinking skills in problem solving has lifelong benefits beyond the school environment, and is particularly important to 21st-century learners in a rapidly-changing world (Robinson, 2011).

Divergent thinking is also defined as “thinking in an unusual and unsteretyped way, e.g., to generate several possible solutions to a problem” (Collins Dictionaries, 2003). This is in contrast to convergent thinking, described as “analytical, usually deductive thinking in which ideas are examined for their logical validity or in which a set of rules is followed, e.g., in arithmetic” (Collins Dictionaries, 2003). Schools typically cultivate convergent thinking, with an emphasis on measurable academic achievement rather than arts study. As stated earlier, the current school climate is also focused on standardized testing, where there are correct and incorrect answers. Intelligence tests also

stress convergent thinking, with predetermined correct responses (Lowenfeld & Brittain, 1987). Standardized testing may be favored in part because it is more difficult to measure divergent thinking ability, “which includes thinking of a great number of different answers, or thinking of different methods or approaches to problems, or thinking of the unusual or novel” (Lowenfeld & Brittain, 1987, p. 78).

The terms “divergent” and “convergent” originated as a result of Hudson’s (1967) study of English schoolboys, where efforts were made to test abilities not measurable by conventional intelligence testing. Hudson used both standard tests and ones with open-ended questions to assess schoolboys’ various abilities. He concluded there were two forms of thinking in operation: one used in science and technology, which he termed “convergent;” and the other, applicable to the arts and humanities, which he termed “divergent” (1967). Both ways of thinking are necessary in developing what Gardner terms “the disciplined mind,” for success in the future workplace (2008). AI allows students to explore all subjects from an artistic lens, thereby opening the way for divergent thinking in subjects other than the arts. AI professional development is needed to help teachers provide students with effective instruction to nurture divergent thinking and other higher order thinking skills through the arts.

If the ultimate purpose of education is to prepare students for a successful life beyond formal schooling, it is useful to determine what skills learners might need in the future workplace, and how those skills can be fostered through arts study. According to a 2011 report published by the Institute for the Future (an outgrowth of the Rand Corporation), the skills considered vital for those entering the workforce in 2020 are

“sense-making, social intelligence, novel and adaptive thinking, cross-cultural competency, computational thinking, new media literacy, trans-disciplinarity, design mindset, cognitive load management, and virtual collaboration” (Davies, Fidler, & Gorbis, April 2011, p. 1). The report described these skills as “proficiencies and abilities required across different jobs and work settings” (April 2011, p. 1). The need for these skills are based on six “drivers of change,” or trends that shape the future workplace identified in the report as

... big disruptive shifts that are likely to reshape the future landscape. Although each driver in itself is important when thinking about the future, it is a confluence of several drivers working together that produces true disruptions. We chose the six drivers that emerged from our research as the most important and relevant to future work skills (Davies et al., April 2011, p. 3).

The Future Work Skills identified by The Institute for the Future are defined below. One of the emergent themes in this study was the influence of arts integrated learning on the development of 21st century work skills. As this case study progressed, it became apparent that most of the skills delineated here were fostered through HOT Schools program with its emphasis on arts-integrated, project-based learning and the development of community. Data related to future work skills as collected in this study is documented and discussed in Chapters Six and Seven.

Future Work Skills: Definitions. Following are the 21st century work skills as defined by the Institute for the Future.

- *Sense-making*: ability to determine the deeper meaning or significance of what is being expressed.
- *Social Intelligence*: Ability to connect to others in a deep and direct way, to sense and stimulate reactions and desired interactions.
- *Novel and Adaptive Thinking*: proficiency at thinking and coming up with solutions and responses beyond that which is rote or rule-based.
- *Cross-Cultural Competency*: ability to operate in different cultural settings in a truly globally connected world; a worker's skill set could see them posted in any number of locations; they need to be able to operate in whatever environment they find themselves.
- *Computational Thinking*: ability to translate vast amounts of data into abstract concepts and to understand data-based reasoning.
- *New Media Literacy*: ability to critically assess and develop content that uses new media forms, and to leverage these media for persuasive communication.
- *Transdisciplinarity*: literacy in and ability to understand concepts across multiple disciplines.
- *Design Mindset*: ability to represent and develop tasks and work processes for desired outcomes.
- *Cognitive Load Management*: ability to discriminate and filter information for importance, and to understand how to maximize cognitive functioning using a variety of tools and techniques.

- *Virtual Collaboration*: ability to work productively, drive engagement, and demonstrate presence as a member of a virtual team (Davies et al., April 2011, p. 1).

Efland's Concerns for the Future. Arthur Efland (2002) identified the essential, cognitive benefits of arts study and related these to skills that would likely be needed in the future workplace and society. In his argument for including the arts in education, he identified world trends and pointed out specific ways in which the arts could help students prepare for a changing and uncertain future. Efland identified the following concerns for the 21st century:

- The continued globalization of international economies, as characterized by the spread and domination of multinational corporations.
- A growing sense of powerlessness at the local level as industries move to other countries where labor costs are lower.
- The global integration of monetary systems and social systems.
- The homogenization and loss of indigenous cultures – casualties of globalization and market penetration.
- The acceleration of technological advance, with new forms of technological play, virtual reality, and the centralization of mass communication media.
- The degradation of the natural environment on a global scale, an increase in population, the exhaustion of natural resources, and global warming.

- The increased pace, quality, and variety of information exchange by means of popular culture, mass consumerism, travel, and the internet.
- The rising aspirations of oppressed peoples in many places, including demands for social equity and cultural identity.
- The mistrust of governments and their role in the personal and social affairs of individuals, which is reflected in the rise of paramilitary and vigilante groups (2002, p. 158).

Efland described how the above phenomena will increase the cognitive demands on individuals in the future workplace, creating a “need for communication and intelligent action in responsible ways in a more complex world than we have known in the past” (2002, pp.158–159).

Efland’s cognitive arguments for the arts. Efland identified four cognitive abilities fostered by arts study that might help individuals meet the demands of the postmodern world. These were presented as arguments in favor of arts education which fosters the development of integrated cognition (2002, p. 159).

The cognitive flexibility argument: takes into account the complex and ill-structured character of learning in the arts, and requires the study of cases and their interpretation. Ill-structuredness becomes evident in one-of-a-kind situations, where judgments are made unguided by rules or generalizations that cover multiple cases. This includes most situations in life.

The integration of knowledge argument: the interpretation of works of art draws strength from knowledge in collateral domains, enables the learner to understand the

context of the work.

The imagination argument: imagination is identified as a pervasive structuring activity using metaphor and narrative to establish new meanings and achieve coherent, patterned, and unified representations. Imagination is essential to our rational capacity to find significant connections, draw inferences, and solve problems.

The aesthetic argument: establishes the point that perceptually vivid aesthetic encounters in the arts have educative value (Efland, 2002, p. 159). Arts study may help individuals adjust to the demands of the modern workplace by developing cognitive skills as outlined by Efland, and the above arguments make a strong case for including arts study in the educational system.

All of the above world skills could be viewed as belonging to one overarching theme that connects all of the above qualities needed to function effectively in the real world, and that is self-knowledge. According to Smith (2014), who studied the development of self-knowledge through use of the expressive arts and group musical improvisation, “Knowledge of the self and of the self as a part of the community (internal knowledges) can [then] be seen as critical knowledge for the cultivation of empowered citizens who are capable of living fulfilled lives that contribute positively to others” (2014, p. 1).

Other considerations for the value of the arts in education. Another way to consider the value of the arts in education is to examine the role of the arts in everyday life. To many, the arts are considered a leisure activity, a backdrop to life’s “real” events (Burnaford et al., 2009). As a result, the arts are often placed at the margins of everyday

life and the artist's life is viewed as an exception to the rule. As Gallas stated, "In our culture, we have always relegated the role of artist to a few people, assuming, I think, that real artistic activity only happens for those who possess "talent," and that most of us lack that mysterious ingredient" (Gallas, 1994, p. 115). As Gardner (2011) observed, both adults and children have a conception of the artist as "a special person, born with unique talents, who sits alone in a garret, waiting for inspiration," and in this view, "the creative artist is seen as remote from the audience, the critic, perhaps even the performer" (2011, p. 258). Similarly, in the schools, the arts are often regarded as the province of the most gifted children (Jalongo & Stamp, 1997). This attitude about the arts is a societal norm reflected in the position of the arts in the schools where they are often placed in the margins of instruction and treated as less important, non-academic subjects.

There is gaining momentum among educators who believe that learners would benefit if the arts were retrieved from the margins and placed at the center of the curriculum, co-equal with other subjects. These educators suggest that the arts be both taught for their intrinsic value, and for the purpose of providing alternate modes of inquiry when integrated with other subjects (Burnaford et al., 2009; Gallas, 1994; Garrett, 2010; Hallmark, 2011; Patteson, 2005). In such a fully-integrated classroom, the artistic process is viewed as an integral part of the student's demonstration of their learning, and "the creative process is an integral part of higher level thinking" (Gallas, 1994, p. 116). In an integrated classroom, "the arts become a way of thinking about thinking," (Gallas, 1994, p. 116), or an "epistemology" (1994, p. 130) for learning.

Hetland et al. (2013) suggest that arts study may allow students to develop artistic

habits of mind that can be useful in other subject areas. For example, in visual art as well as science, reflection and imagination are useful mental habits in solving problems and creating new works. Stevenson and Deasy (2005) also suggest that arts study may help create a classroom environment where personal relevance and student ownership of learning is allowed to transform the educational experience. This assertion is consistent with Carl Rogers (1969) who described self-directed, meaningful learning as essential to true education. He maintained that a critical function of education should be to release human potential, to facilitate change and learning, rather than dictate the content of learning (Rogers, 1969). Arts study fulfills these goals by allowing students to follow their interests and discover their potential, which may in turn lead to deeper understandings and motivation toward lifelong learning. Ultimately, “motivation is born out of success. When young people find out what they are good at in education, they tend to improve overall” (Burnaford et al., 2009, p. xix).

Arts Integration

The purpose of this section is to illustrate the various benefits of AI for students, including increased academic achievement, social skills, and positive effects on behavior and attendance in school. I then examine the significance of AI and its potential to enhance learning, due to the cognitive nature of the arts and how they may influence the development of the intellect. The discussion then moves to recent studies in cognitive science and touches briefly on the experiential educational theories of John Dewey, Arthur Efland, Elliott Eisner; and Howard Gardner’s Theory of Multiple Intelligences. The contributions of these theorists will be discussed in further detail in Chapter Three,

as theoretical underpinnings for AI.

There are many educational benefits to AI; these include academic, social and emotional competencies. AI programs for early childhood have demonstrated their effectiveness in increasing school readiness for children at risk (Brown et al., 2010) and emotional competencies for students at risk (Brown et al., 2012).

There is a growing body of research that indicates a positive correlation between AI and increased academic achievement. For instance, research has shown that the implementation of integrated curricula at the elementary level resulted in higher levels of achievement in mathematics (Albright, 2012; An, Capraro, & Tillman, 2013; Venzen, 2011). Miller (2011) found that an arts-based approach is beneficial for second language learners in a general education setting. This case study at a K–5 charter school revealed that the arts had multiple positive benefits, most notably an increase in engagement and cognitive growth. Other researchers have found that the arts enhance students' understanding and memory of cultural, historical, and geographical studies (Richardson & Brouillette, 2013). An important benefit mentioned in multiple studies was that the arts fostered student-centered learning, as it aided students in self-discovery whereby they were able to take a more active role in determining the focus of their learning (Eisner, 2002; Hetland et al., 2013).

While these studies addressed specific areas of achievement, other research has revealed potential social and behavioral benefits that may also have positive effects upon student achievement. For example, students at Central Falls High School in Rhode Island expressed that learning through the arts mattered to them because it fostered student-

centered learning whereby they were more engaged in the classroom. As one student described it, “With the arts in the classroom, I was more involved. We got to bring our own ideas” (Stevenson & Deasy, 2005, p. 18).

Teachers have also observed improvements in attendance as a result of AI. For example, in a study to determine the effect of integrated instruction on fifth grade mathematics test scores, (Albright, 2012; Venzen, 2011) found that attendance improved on the integrated instruction days as compared with the non-integrated days. Results from a study on arts integration at a K–5 charter school indicated increased achievement for English language learners, but also positive influences on student engagement and growth (Goldberg, 2004; Miller, 2011).

A multi-school study showed that attendance at the high school level also improved and drop-out rates decreased as a result of arts-based learning. In the words of one student who was enrolled in a Human Creativity arts program at Central Falls High School in Rhode Island, “If it weren’t for this program, I wouldn’t be in school at this point” (Stevenson & Deasy, 2005, p. 33).

At the Grizzly Hill School in the Sierra Nevada Mountains in northern California, the sense of community within the school and the school’s connection to the outside community were both enhanced through theater and art presentations. Presentations that were prepared at the Grizzly school and then performed in the wider community were also shared with a large number of transfer students from another poor rural community whose school had closed. Inviting these students to participate in the productions helped ease tensions between the communities and helped the new students become a part of the

Grizzly school community (Stevenson & Deasy, 2005).

Arts Integration and Learning

While I have noted the academic, social, and emotional benefits of AI, I next consider more closely the significance of AI and its potential to enhance learning. Specifically, I explore the cognitive nature of the arts and the significant role that they can play in the development of the intellect, by examining recent studies in cognitive science; experiential educational theories of John Dewey, Arthur Efland, Elliott Eisner; and Howard Gardner's Theory of Multiple Intelligences.

Despite the advances of the cognitive sciences over the past 20 years, where cognitive psychologists have influenced the educational community in recognizing the arts as cognitive subjects (Efland, 2002; Eisner, 2002; Gardner, 1983), the academic bias against arts integration still exists in many public schools. This bias may be partly due to a discipline-wide and deeply rooted allegiance to Bloom's Taxonomy (1956), which separates cognitive and non-cognitive subjects. According to this taxonomy, the arts belong in the affective category of subjects and are therefore non-cognitive. This bias against the arts may also reflect a long-held preconception by our society that the arts are recreational activities that are not intellectually demanding. However, the cognitive science orientation maintains that all mental activities are cognitive, including the arts (Efland, 2002; Eisner, 2002; Melnick, Witmer, & Strickland, 2011). Recent studies in cognitive science and neuroscience have pointed to "the arts' potential as a powerful tool to enhance teaching and learning, showing that the brain and body make up a single, fully integrated cognitive system" (Melnick et al., 2011, p. 155).

The idea that aesthetic intellectual activity is equal to other mental pursuits was posited by John Dewey, who believed that all education is experiential, and that intellectual experience has aesthetic aspects (1934). He maintained that the aesthetic is an integral part of the thinking process, and ultimately that no idea is complete without this aesthetic element. He asserted that the thinking process is multifaceted experience with its own internal integration.

The work of Howard Gardner has also influenced the field of education in that it has helped to provide a rationale for the inclusion of arts education in the schools. Gardner's Theory of Multiple Intelligences (1983) posits that there are at least seven intelligences: verbal/linguistic, logical/mathematical, bodily-kinesthetic, visual/spatial, musical, interpersonal/relational, and intrapersonal/self-knowledge. The theory holds that each person possesses all of these intelligences to greater or lesser degrees. Because intelligence is now more commonly conceived as area-specific, educators have moved away from the former IQ question of "how smart is this child," and now ask "in what ways is this child intelligent" (Jalongo & Stamp, 1997, p. 161).

The Theory of Multiple Intelligences has influenced educators to differentiate instruction in order to draw upon student strengths and to remediate their weaknesses. Because AI offers multiple pathways to learn subject content, it may benefit students who have strengths or interest in areas other than math and language, the subjects commonly assessed through standardized tests required as a result of No Child Left Behind (The 107th Congress of the United States, 2002). Although the arts are linked to several intelligences (musical, linguistic, visual/spatial, and bodily/kinesthetic) Gardner did not

propose that one subject be used to teach another, as in AI, but he described how certain subjects can be gateways for entry into others, for example, "...a course of history opens up the gates to a range of social sciences; one art form eases entry into others" (2008, p. 31). The application of Gardner's theory by the HOT Schools program is consistent with his view, in that the various intelligences are said to provide gateways, or multi-modal entry points; in short, ways of presenting lesson topics to students. This will be discussed in further detail in Chapters Three, Six and Seven.

According to Merryl Goldberg (2001), the arts provide alternative means of communication and in this capacity are valuable teaching tools in multicultural and multilingual settings: "In considering the arts as languages of expression, teachers offer bilingual and English students more freedom to work with ideas and express their understandings without having to depend solely on the English language" (2001, p. 14). The arts might thereby provide an alternative view of what it means to be literate, as posited by language arts theorists who promote the concept of "multi-literacy" (Goldberg & Scott-Kassner, 2002, p. 1056), whereby forms of representation other than written language can be used in communication. These might include images in visual art or musical symbols. As cited in Goldberg and Scott-Kassner (2002), the arts have been described as languages of learning (Gallas, 1994) and music in particular has been described as a language of emotions (Hart, 1991).

Student Benefits of Arts Integration

“Education as a process can be thought of as enabling individuals to learn how to secure wide varieties of meaning and to deepen them over time” (Eisner, 2002, p. 45).

There is a growing body of research which points toward a link between AI and increased academic achievement (Albright, 2012; Hetland et al., 2013; Miller, 2011; Snyder et al., 2014; Venzen, 2011; Wiggins, 2001); school readiness (Brown et al., 2010); and emotional functioning of students at risk (Brown et al., 2012). The following is a representative collection of studies that indicate promising links between academic achievement and student growth as a result of AI programs.

Eleanor D. Brown, Barbara Benedett, and M. Elizabeth Armistead (2010) conducted two studies on arts enrichment and school readiness for pre-school aged children considered at risk. The first study examined the academic achievement of low-income students who attended the arts enrichment program, Kaleidoscope, at Philadelphia’s Settlement Music School. The program, which operates in partnership with Head Start, offers practice in school readiness skills through early learning, music, creative movement, and visual arts classes. Results showed that students who attended the program for two years demonstrated higher academic achievement than those who attended for one year. Results also suggested that achievement gains were not contingent upon students’ maturation of an additional year.

The second study compared the receptive vocabulary level of students who attended Kaleidoscope with those who attended an alternative preschool program for one

year. Results showed a higher level of receptive vocabulary skills in those students who attended the arts enrichment program. Based on results of the study, the authors concluded that arts enrichment might advance educational outcomes for children at risk.

Another study involving the Kaleidoscope program focused on the impact of arts-integrated preschool programming on the emotional functioning of pre-school children at risk (Brown et al., 2012). The framework for the study is based on differential emotions theory, which states that discrete emotions are activated in response to the environment, and play an integral role in explaining behavior. The study measured emotion expression and emotion regulation in preschool students at Kaleidoscope, a fully integrated program, and a comparable pre-school that was not arts integrated. The comparison study was conducted to determine whether an early childhood arts-integrated program offered an advantage to its students over a comparable early childhood program that was not fully integrated.

Other studies demonstrated how arts-based instruction was beneficial in optimizing student engagement, cognitive growth, and in providing alternate approaches for students for whom English is a second language (Gallas, 1994; Goldberg, 2004; Miller, 2011). Teachers who participated in professional development and implementation of an arts integrated curriculum at a rural K–5 school claimed substantial academic gains, increased student engagement, more success at reaching second language learners, and improved student behavior. Teacher satisfaction increased as a result of AI PD, where it was observed their lesson plans were more creative in the AI program than the regular curriculum. Teachers in the study valued AI professional development

opportunities and it became apparent that both administrative and structural support were needed for classroom teachers to receive adequate educational opportunities to develop and sustain integrated programs (Miller, 2011).

AI instruction has been found to have a positive effect on fifth grade students' mathematics test scores (Albright, 2012; Venzen, 2011). Research data showed a statistical difference in pre- and post-integration scores in relation to the development of new teacher practices. Positive effects that the authors linked to student achievement included the adaptability of lessons toward various learning styles as based on Gardner's Theory of Multiple Intelligences and increased student engagement. Data also showed a decrease in student discipline referrals and absenteeism. Teacher surveys revealed a desire among teachers for more AI professional development opportunities in order to increase student academic achievement (Saraniero & Goldberg, 2011; Saraniero et al., 2014; Snyder et al., 2014; Venzen, 2011).

Arts study and AI encourages students to use their imagination in self-expression, bringing personal relevance to the classroom, and teachers thereby become facilitators rather than purveyors of information (Bloomfield & Childs, 2002; Burnaford et al., 2009; Snyder et al., 2014; Stevenson & Deasy, 2005). For example, when students are engaged in the arts through project-based learning or other creative activities, the role of the teacher changes from that of a lecturer to a facilitator of ongoing, creative, collaborative student work. In an integrated classroom, students know that their art work is valued and respected, and this can have a transformative effect on teacher-student relationships (Burnaford et al., 2009; Stevenson & Deasy, 2005). A student at the arts-integrated Dyett

Academic Center in Chicago, Illinois, said the teachers there “like to listen to what students have to say, not just think that they’re supposed to tell us this and that just because they’re the teacher” (Stevenson & Deasy, 2005, p. 70). Students in this type of educational environment felt they were making contributions to their learning and to the community, and those who were at risk were more likely to stay in school as a result of AI programs (2005).

The above studies reveal how AI may help expand student potential in terms of school readiness, including receptive vocabulary skills and emotional competencies (Brown et al., 2010; Brown et al., 2012; Miller, 2011). Studies also show how AI may be influential in the increase of student engagement and cognitive growth, and may provide effective modes of instruction for second language learners in multicultural populations (Donovan & Pascale, 2004; Goldberg, 2004; Hetland et al., 2013; Jalongo & Stamp, 1997; Miller, 2011; Stevenson & Deasy, 2005). There is evidence the AI instruction has influenced mathematics test scores and improved student attendance and behavior issues (Miller, 2011; Stevenson & Deasy, 2005; Venzen, 2011). Students in AI programs may feel they are taking an active role in their learning and begin to see themselves and their teachers in a new light, potentially transforming the teacher-student relationship (Stevenson & Deasy, 2005). As a result of classroom or public display of student arts or AI projects, students become active, contributing members of the educational community (2005). These examples demonstrate multiple benefits of AI instruction and provide justification to explore its potential in the classroom.

Setting the Stage for AI

In order to implement a successful AI program, it is important for teachers to create optimal conditions for AI learning to take place, which requires some changes from the non-integrated environment. In classrooms where the arts are embraced as a process of learning, there are occasions when teachers struggle to let go of controlling impulses and to instead assume the role of facilitator. As a teacher participant in one AI study remarked:

You're taking all my organization out of my hands; and then I have to deal with this – not realizing that children learn so much more and it's so much easier for them to learn cooperatively. I mean I never dominated a class, I always interacted, but on my terms, not theirs. And I had to let that go; it now had to be on their terms (Stevenson & Deasy, 2005, p. 83).

Without these understandings and a grasp of artistic skills, teachers might not have the capacity to support AI learning and fully appreciate the intellectual, expressive, and emotional meanings of student art work (Stevenson & Deasy, 2005). Stevenson and Deasy (2005) also emphasized that teachers are the ones who determine the extent to which the arts hold meaning in their classrooms, and the respect they extend toward student works of art helps create the safe space for students, referred to by the authors as a “third space” (2005, p. 10). This will be described in more detail in Chapter Three under the heading *The Transformative Nature of the Arts*.

Schools in the Stevenson-Deasy (2005) study supported arts integration by creating opportunities for partnerships between classroom teachers and school arts

teachers or practicing artists from the community. Common planning time was provided for classroom teachers and arts teachers, and all of the schools in the study maintained community partnerships with orchestras, theaters, museums, or universities. Artists from the surrounding communities not only shared their high levels of expertise, they also provided models for students and teachers alike in their respect for the struggles involved in creating art.

Additionally, evidence suggests that AI professional development may be related to positive outcomes in student achievement (Garrett, 2010; Saraniero & Goldberg, 2011; Saraniero et al., 2014; Snyder et al., 2014). In a case study of AI professional development, Garrett examined teacher perspective and transfer to practice in five elementary schools. Teachers learned multi-modal strategies through a framework based on the Intensive Development through the Arts (IDEA) model that offered sustained collaboration between artists and teachers. Benefits of the IDEA experience were positive influences on learning environment, teacher practice, and reaching diverse learners; the resulting data ultimately revealed a connection between these influences and student achievement.

Definitions, Styles, and Terminology for Arts Integration

Definitions for AI. There have been various definitions and associations of the term “arts integration” as utilized by educators over the past twenty years. The term “integration” originates from the Latin root “integrare” which means to make something whole (Burnaford et al., 2007). AI has been referred to as “learning in and through the arts,” or “learning with the arts” (Goldberg & Scott-Kassner, 2002, p. 1056) or simply as

a “vehicle for learning” (Burnaford et al., 2007). AI has also been defined as “a search for the rightness of fit between domains of knowledge across the boundaries of disciplines” and “arts learning that is deeply immersed in other content areas (Burnaford et al., 2009, p. xxxiii).” The term “art enrichment” is sometimes used synonymously with arts integration (Settlement Music School, 2014). Bresler (1995) addressed the inconsistent usage of integration terminology and established a common vocabulary for AI, in her study where she identified four styles of AI and clarified and defined AI terms. For the purposes of this study, the term integration will be used in accordance with Bresler’s definitions.

Styles of AI. In a three-year ethnographic study, Bresler (1995) observed and defined four styles of AI practiced in schools: subservient, co-equal or cognitive, affective, and social. Bresler found that AI practice varies in accordance with each school’s administrative directives, organizational structures and resources. She pointed out integration is a construction; its practice may take many forms and “can mean very different things in terms of contents, resources, structures and pedagogies to different people” (1995, p. 1).

Bresler presented the four AI styles as theoretical constructs, noting that in practice, these styles may overlap and be used in various combinations. Each style reflects different values and roles of the arts in general education as well as within the arts disciplines. The two most prevalent styles, the subservient and social, reflect society’s traditionally-held views of the purpose of the arts to support cultural or social activities (1995).

Each AI style requires certain conditions for implementation, the most complex being the co-equal, or cognitive style (Bresler, 1995), which requires particular organizational structures, collaborative efforts between classroom teachers and arts specialists, and applicable professional development. In the cognitive style the arts are treated as equal to other subjects and as authentic modes of inquiry. Arts study incorporated into the cognitive integration style encourages mental dispositions that are developed less frequently or are absent in the teaching of other subjects, yet are applicable to all disciplines.

Cognitive Style. The cognitive style of AI requires the highest level of professional development, which may be why it was observed by Bresler (2004) as the least common practice. The styles of AI available in each school in Bresler's study reflect the various perspectives held by educators on AI: administrators may pursue AI as a means of saving money or time; arts specialist teachers may seek to have the arts placed in a more central position in the curriculum; while classroom teachers may be less accommodating if they regard AI as one more initiative to complete without sufficient resources to support it. AI professional development may alleviate these concerns, and the present study may increase awareness of programs available to teachers and thereby help support the practice of co-equal, cognitive style AI programs.

Subservient Style. In the subservient style, the arts serve to augment the academic curriculum with supplementary projects that are mostly craft oriented or technical, such as the creation of visuals or the singing of songs from a particular era of study (Bresler, 2004). As such, these projects involve a low level of cognitive activity

and are not designed to foster aesthetic awareness or critical thinking skills.

The subservient style was observed to be the most prevalent form of AI in the schools, where the arts are used by classroom teachers to enhance lessons rather than develop higher order thinking skills such as “aesthetic awareness, critical reviewing, or specific artistic skills” (1995, p. 5). For example, students might sing a song about the fifty states during a lesson in U.S. history, or draw shapes from a geometry lesson. In these cases, Bresler observed that the teachers exhibited little training in the arts, and arts specialists were typically not consulted in planning the lessons.

Although the subservient approach did not promote higher level thinking skills, it provided modes of presentation other than numerical or verbal. According to teacher participants in the study, the arts helped students build self-esteem and provided new avenues of learning; for example, those who had problems reading or expressing themselves verbally were better able to understand lesson content and communicate their learning through the arts. The subservient style was time-saving and accessible, since many of the lesson plans were contained in teacher journals and were readily available to teachers without arts training.

Co-Equal, Cognitive Integration Style. Bresler (2004) noted that co-equal, cognitive was the least common of the integration styles observed in the study, although it is the one most supported by scholarly research. This style requires a sophisticated knowledge and expertise in the arts; therefore, it was practiced in cooperation with arts specialists or by classroom teachers with extensive arts training.

The co-equal integrated activities involved a higher level of cognitive function

and fostered higher level thinking skills and aesthetic awareness. Teachers collaborated with arts specialists to create units of study on lines across the curricula in literature, social studies, music, visual arts, and dance. The cognitive integration style typically incorporated “active perception and critical reflection on the technical and formal qualities of a project” and utilized “art-specific skills and sensitivities; provided guidance that required students to observe, perceive, and come up with their own interpretations; and posed higher-order questions of analysis, synthesis, and evaluation” (1995, p. 7).

The Affective Style. Bresler (2004) observed that the affective style of AI performed two different functions: change of mood, or “receptive activity” and creativity or “active creation.” Teachers used receptive activities as a means providing a change of pace, mode, or mood. For example, teachers employed the receptive function to create an atmosphere for learning by playing background music during a math class. In another case, visual art was presented to stimulate students’ reflections, feelings, or reminiscences. The receptive function also allowed students to explore their feelings in response to works of art or music rather than perform according to strict guidelines.

In contrast to the passive involvement of the mood category, the creative mode involved active student participation. Activities were open-ended; materials were provided and students were allowed to explore, create, and express themselves through the arts. The creative function allowed students to utilize their imaginative skills as teachers facilitated rather than dictated the projects. This approach offered an alternative to the highly structured regular curriculum, which did not customarily provide opportunities for self-expression or use of the imagination.

Social Integration Style. In the social integration style, the arts are used for community events such as seasonal or holiday concerts, PTA meetings, or cultural events where parents and the outside community may attend (Bresler, 2004). In this style, the arts are used to enhance school social functions and create a sense of community within the school environment and promote positive relations with the outside community as well. The arts played an important role in making these events successful, and students were actively involved in choral performances, dance, drama skits, arts, crafts and decorations. Public performances also created awareness and support regarding budget issues for the arts, and increased attendance at functions such as PTA meetings. In these cases the objective was not to educate but rather to entertain. Yet, as Bresler pointed out, “the arts were there, public, celebrated, and appreciated” (1995, p. 8).

Terminology for AI. Bresler (2004) compiled definitions for an array of AI terminology used among educators. Distinctions were also made between content-oriented and skill-oriented integration. Integration of content is thematic and aimed at the understanding of “higher-order content” (1995, p. 2), whereas skill oriented integration involves the development of skills and strategies that can be applied across the curriculum toward understanding situations and problem-solving. Following are the definitions of AI terms included by Bresler (1995):

- Infusion: integrating a particular subject across the curriculum;
- Topics-within-disciplines: integrating multiple strands of the same discipline within the instructional setting;
- Interdisciplinary: maintaining traditional subject boundaries while aligning

content and concepts from one discipline with those of another;

- Thematic approaches: subordinating subject matter to a theme, allowing the boundaries between disciplines to blur;
- Holistic approaches: addressing the needs of the whole child, including cognitive, physical, moral, affective, and spiritual dimensions;
- Multidisciplinary: looking at a situation as it was portrayed in different disciplines;
- Interdisciplinary: considering a problem in terms of different disciplines and then synthesizing these perspectives in coming up with a more general account;
- Metadisciplinary: comparing the practices within a particular discipline;
- Transdisciplinary: examining a concept as it appears in political and in physical discourse.

Bresler (2004) also indicated that there is a paucity of literature on operational AI curriculum, and a lack of textbooks and formal requirements. AI terminology is not used consistently and the term integration can be interpreted in various ways. Despite the lack of consistency in usage, the above definitions of styles and terminology may be helpful in understanding how these terms may be used and the various ways in which integration is implemented in the schools. This suggests a need for quality AI professional development programs to support the consistent practice, use of terminology, and effective, sustainable implementation of AI programs in the schools (as will be discussed in detail later in this chapter).

Bresler (2004) identified the above integration styles as theoretical constructs, but noted that actual practice reveals that much of arts integration is eclectic in nature and can combine any or all of the above styles at various stages. Despite these variations, the styles are independent and represent different roles and values of arts education in the schools. According to Bresler, each style reflects fundamental differences as to the role of the arts in the overall curriculum and each implies different values as to what is considered important for children to know in the arts. Ultimately, these values and goals influence the use of resources, pedagogies of arts instruction and curricular structures in relation to and within the overall school curriculum. With the above considerations in mind, where does one begin to conceptualize and develop an AI curriculum? An examination of curricular structures for AI may clarify how such programs may be developed.

Curricular Structures of Arts Integration

“The aim of the educational process inside schools is not to finish something, but to start something. It is not to cover the curriculum, but to uncover it” (Eisner, 2002, p. 90).

Elliot Eisner outlined four typical curricular structures of AI (2002, pp. 39–40). He prefaced this outline with a caution against trying to justify the arts in the schools solely on the basis of their possible effect of increased academic performance. There are many functions of the arts in education; according to Eisner (2002), how they are used in AI should be based on the goals and context of a given scenario, for which “we need to be practical and principled, creating the appropriate mix for the particular occasion”

(2002, p. 42). This is similar to Bresler's (2004) view regarding the many contexts influencing the styles of AI practice in the schools. Also, Eisner's curricular structures are in alignment with Bresler's definition of the co-equal, cognitive style of AI.

Historical/cultural. The historical/cultural form of integration is used to help students understand a particular historical period or culture. Eisner gave for his example the Civil War period, of which students might study the photography, music or architecture of that period. If the study of the historical period is approached through the arts, as Eisner suggests, then societal values such as the popular Baroque aesthetic of ornateness may provide insights into the culture of that period. This would be in keeping with Bresler's cognitive level of AI (1995).

Within the arts. This form of integration is used to help foster an understanding of the similarities and differences among the arts. For example, all arts are expressive, but use different media to achieve forms of expression. Students might also examine the concept of rhythm as it applies to music, poetry or the visual arts. The aim is to discover what the arts have in common and how they are different. The application of one artistic concept across the various arts is in keeping with Bresler's (2004) co-equal, cognitive AI style.

Other subjects. This approach identifies a major theme or concept that can be traced through the arts and other subjects. Eisner used for an example the biological concept of metamorphosis, which can be traced through music, demographics and film. Students might examine how a melody is developed or varied in a piece of music, how the demographics of an area transform the terrain, or how visual images become altered

in a sequence of photographs. The tracing of a major theme across the subjects is another example of Bresler's (2004) co-equal, cognitive style of AI.

Problem solving. Students are presented with a problem and explore various means of solving it through the use of different arts or other subjects. An example given by Eisner is the design of a playground for children, which requires multiple perspectives: design, physical layout, developmental considerations, aesthetic qualities, etc. Curriculum can thus be designed for problem solving that requires the integration of several subject areas. The incorporation of multiple perspectives treated equally represents the co-equal, cognitive AI style as described by Bresler (1995).

In order to effectively apply curricular structures such as those described above, AI professional development is needed to equip educators with the knowledge and skills involved in integrating the arts across the curriculum. Importantly, the structures identified by Eisner represent the co-equal, cognitive AI style, which requires the highest level of professional development for teachers to implement effectively. It may be helpful at this juncture to examine current AI professional development programs available to teachers, their philosophies, organizational structures and courses of study.

Arts Integration Programs and Professional Development

“Traditional teaching is not the status quo here. I think arts integration enables teachers to look for new and different ways to think about presenting traditional goals and objectives.” Principal, Clarkson School of Discovery (Stevenson & Deasy, 2005, p. 80).

The purpose of this section is to provide overviews of established AI PD

programs in the United States in order to situate the HOT program within current practices. The discussion touches briefly on in-service AI PD available through public and private schools, and then describes the organizational structures and PD strategies of the Annenberg Challenge; the Galef Institute; Socios Unidos para Artes Via Educacion, or SUAVE; the Chicago Arts Partnerships for Education, or CAPE, various community partnerships and, the A+ Schools Program in North Carolina, and in-house AI PD at Philadelphia's Settlement Music School.

There are a few major arts integration initiatives underway in the United States, comprised of partnerships between schools and a variety of arts organizations. These programs offer integrated instruction for students and typically include professional development for teachers at the participating schools. The purpose of these programs is to expand student learning potential by introducing AI to the curricula of various educational communities. These programs typically offer or require teacher participants to take part in professional development aimed toward the advancement of integrated instruction in the schools.

AI professional development offered by public and private schools varies widely, according to the available resources, operational structures, faculty scheduling, and administrative directives at each site (Bresler, 1995; Hallmark, 2011; Stevenson & Deasy, 2005). Studies reveal the existence of a variety of AI professional development practices, offered through organizational partnerships, institutes, artists-in-residence, or in-house programs developed by individual schools to suit their needs. These are intended to help classroom teachers become more adept in the creation and implementation of AI

strategies and curricula that would bring the arts into the mainstream of learning (Garrett, 2010; Hallmark, 2011; Patteson, 2005; Stevenson & Deasy, 2005).

The Annenberg “Challenge to the Nation” was founded by Walter Annenberg in 1993 with the mission of improving the public schools (Annenberg Institute, 2014). An outgrowth of the Annenberg Challenge is an initiative to enhance arts education and promote AI as a means of improving student achievement. These programs typically function in partnership between schools and arts organizations, and are in operation at the following sites: The Center for Arts Education in New York City; the Arts for Academic Achievement in Minneapolis, the national Transforming Education through the Arts Challenge in California, Florida, Ohio, Nebraska, Tennessee, Texas, and Illinois. For example, the Chicago Challenge is a three-year program operating in three Chicago public schools in conjunction with the Chicago Symphony Orchestra, which is committed to the integration of its resources into the Chicago schools. The school district provides release time for teachers to learn from the musicians and to share their learning with each other (Goldberg & Scott-Kassner, 2002). Teachers then create the curriculum, utilizing knowledge gained from sessions with the orchestra musicians.

The Galef Institute. This institute was founded in 1989 with research focused on the program model called the Different Ways of Knowing (DWoK). The organization’s stated goal is “to improve student achievement by strengthening the teaching profession” (The Galef Institute, 2014). The organization works with the public schools, “focusing on the integration of history and social studies with literature and writing, math and science, and the arts” (Goldberg & Scott-Kassner, 2002, p. 1062). The DWoK model is

based on Gardner's Theory of Multiple Intelligences and is a comprehensive program for teacher professional development in thematic, arts integrated instruction (Munoz et al., 2007). The primary goal of the program is to instigate overall school reform and includes several initiatives on exploring the role of the arts in children's learning (Goldberg & Scott-Kassner, 2002, p. 1062).

The DWok program at Galef is a multi-year, collaborative effort that seeks to prepare teachers to design and implement standards-driven interdisciplinary learning in their classrooms. Collaborations include partnerships between teachers, principals, artists, and educators from other school districts, and state departments of education, college and university researchers and faculties, private foundations, corporations and business (Williams, 2013). The three-year professional development curriculum includes the following content areas: teaching and student learning resources, teacher planning guides; strategies for teaching at-risk students; a library of thematically organized, culturally diverse children's literature and references books for each classroom; historical documents, maps, videos and related media; a professional library of best teaching practices. There is also a three-year course of study for professional growth and community building that includes the following topics: developmental support on the school and district level; annual summer orientations and renewal institutes, seminars and workshops offered throughout the year, instructional coaching and technical assistance, leadership training, leadership teams of school and district personnel to facilitate change, and teacher-to-teacher communication and other professional connections through the DWoKnet website (Williams, 2013). Through the Galef Institute programs, school

change is initiated in various ways according to the needs and the makeup of each school community. Reports have indicated increased student achievement both academically and socially, attributed to the supportive structures of ongoing professional development sessions, regularly scheduled support group meetings, collaboration among teachers, artists, teacher coaches, and the availability of integrated teacher and student materials (Williams, 2013).

The Galef Institute professional development program as based on the DWoK model is similar to the HOT schools program in several respects. First, both include Gardner's Theory of Multiple Intelligences as part of their theoretical framework, and promote the idea of teaching to student strengths and interests. Second, the professional development is extended to the larger school community: teachers, administrators, and parents, as in the HOT school program. Both the Galef Institute and HOT Schools programs offer ongoing professional development in the form of seminars, workshops, support meetings, and summer institutes, in addition to a network of educators and resources that are accessible through the organization's websites.

Two additional AI projects. I now highlight two long-term professional development projects that are not specifically devoted to arts integration professional development but are designed to help second language learners through arts integration. The Socios Unidos para Artes Via Educacion (SUAVE) is a collaborative project between California State University San Marcos, the California Center for the Arts in Escondido, and several school districts. The program is designed to help teachers reach second language learners through the arts in the areas of mathematics, science, social

studies, and language arts, and provides instructional support for the challenges of multicultural and multi-lingual classrooms (California State University at San Marcos, 2014).

The SUAVE professional development mission states that it is focused on helping teachers develop their abilities to teach both *about* the arts and *through* the arts, also referred to as AI (California State University at San Marcos, 2014). These two aspects of the program are carried out as follows: for teaching *about* the arts, specific artistic disciplines and practices are developed through workshops, activities and institutes; for teaching *through* the arts, modules are offered to instruct teachers on how to create and implement arts integrated curricula with core subjects such as social studies, science, language arts, and mathematics.

The institutes are offered that last from several days to one or two weeks, and cover skills in arts instruction, curricular connections, and state and national standards (California State University at San Marcos, 2014). Arts coaches work with teachers to help them develop the artistic skills needed to teach academic subjects through the arts. The professional development is customized for each school to provide the appropriate instructional support for teachers, who choose among a variety of seminars or workshops that enable them to design and implement standards-based, integrated curricula for their students. SUAVE professional development is similar to the HOT schools approach in its collaborative approach with teachers and artist coaches or teaching artists, the variety of workshops, and the adaptable approach for each unique school community (California State University at San Marcos, 2014; Koba, 2014a). The professional development

initiative, DREAM (Developing Reading Education with Arts Methods) is an outgrowth of the SUAVE program. DREAM is focused on providing PD for classroom teachers in the integration of theatre and visual arts into reading curricula. This project operates in partnership with the San Diego County Office of Education, North County Professional Development Federation and the California State University San Marcos (CSUSM). The DREAM program tried two models of AI PD and conducted a comparison study on their effectiveness; one model was a stand-alone summer institute and the second combined the institute with coaching throughout the school year. The study found the coaching model to have a greater impact on teacher proficiencies in AI than the stand-alone summer institute (Saraniero & Goldberg, 2011). This is in keeping with HOTS Schools program that combines multiple PD strategies to reinforce learning at their annual summer institute, such as coaching and other PD offerings throughout the school year.

The Chicago Arts Partnerships for Education (CAPE) was established in 1992 with the aim of reviving arts programs in the Chicago schools and implementing integrated instruction through teacher-artist partnerships at all grade levels. The CAPE professional development program “advances the arts as a vital strategy for improving teaching and learning by increasing students’ capacity for academic success, critical thinking and creativity” (Chicago Arts Partnerships in Education, 2014). CAPE’s professional development is designed to enable teachers to work with professional artists in “planning integrated instruction, joining instruction in an art form such as painting or music with specific instructional goals in other subjects such as reading or science” (Catterall & Waldorf, 1999, p. 48). CAPE is described as “a learning organization, a

living laboratory” (Chicago Arts Partnerships in Education, 2014) in which long-term partnerships between teachers and artists are cultivated and maintained. The program fosters collaboration between teachers, artists and students, where students are regarded as “creators of culture” (2014).

CAPE research and methodology is based on four components: inquiry, documentation, professional development, and collaborative research (Chicago Arts Partnerships in Education, 2014). The key to the development of AI in the schools is inquiry: the process of asking broad questions that can be addressed across subjects, grade levels, schools, and programs. CAPE researchers and educators focus on asking open-ended questions that lead to a greater understandings of learning through the arts, and may also lead to further questioning. Questions are re-visited by teachers as they engage in partnerships with professional artists in the ongoing process of AI professional development (Chicago Arts Partnerships in Education, 2014). Teachers and artists work together to plan AI curriculum, and co-teach to deliver the integrated instruction. Teachers and artists from many Chicago school districts meet regularly to share and disseminate best practices, share new ideas and questions (Chicago Arts Partnerships in Education, 2014).

CAPE employs professional researchers to analyze and review the organization’s documentation in professional development and student data. Research reports are shared regularly with teachers and artists, providing feedback for reflection and action. CAPE seeks to improve teachers’ work environment from that of isolation to an ongoing collaboration as part of the larger learning community. The success of the CAPE

professional development program is influenced by the regular dissemination of research data, tools, and strategies. Through co-teaching and sharing of ideas, artists and teachers are able to experiment and develop successful teaching strategies to improve integrated instruction.

Additional AI school programs. The A+ Schools Program in North Carolina was established in 1993 by the Kenan Institute for the Arts with the mission of whole school reform through strong arts instruction and AI across the curriculum (North Carolina Arts Council, 2014). The theoretical foundation for the program is based on Gardner's Theory of Multiple Intelligences where the arts play a central role across the curriculum (Goldberg & Scott-Kassner, 2002, p. 1058).

Becoming an A+ school involves an initial three-year commitment, followed by ongoing professional development designed specifically to meet the needs of each school. Professional development is offered in several forms: workshops, a five-day summer institute, summer courses, and a sharing network of A+ teachers (North Carolina Arts Council, 2014). The A+ professional development program equips teachers to take leading roles in the process of school reform. Each A+ School designates a coordinator or coordination team of teachers to provide leadership in implementing the program. These teams typically coordinate with administration and function as the school's liaison to the larger A+ network.

The A+ program is adapted to meet the needs of individual schools within the contexts of their community and their specific educational needs. Teachers and other staff work collaboratively to create and implement integrated thematic units with strong

arts and application of Gardner's Theory of Multiple Intelligences (North Carolina Arts Council, 2014). A+ schools foster productive relationships with parents, who attend meetings known as "informances," designed to communicate program information (North Carolina Arts Council, 2014). A+ schools work to establish relationships with local artists, arts organizations, businesses and higher education, drawing on donated resources of expertise and funds to help build AI programs.

The A+ Schools professional development program is similar to the HOT schools approach with inclusion of the larger educational community: teachers, support staff, parents, and administrators all participate in professional development. As in the HOT schools program, A+ offers ongoing professional development that includes workshops during the school year and a five-day summer institute. Both programs apply Gardner's Theory of Multiple Intelligences to identify and build on student strengths in classroom instruction, and both programs are adaptable to fit the needs of individual schools (Koba, 2014a; North Carolina Arts Council, 2014).

There are a number of partnerships established by individual schools in order to create and implement AI instruction. In the absence of an outside professional development organization like those described above, association with professional artists or arts organizations are needed in order to help teachers create quality integrated instruction. For example, the Peter Howell Elementary School in Tucson, Arizona, and the Arizona Opera Company partnered together to plan and analyze the staging of an opera created by first grade classes at the school (Stevenson & Deasy, 2005).

In order for classroom teachers to take the fullest advantage of the arts in their

classrooms, they must attain an effectual level of artistic competency as well as a thorough understanding of the nature of work in the arts (Garrett, 2010; Hallmark, 2011; Saraniero et al., 2014; Snyder et al., 2014). Partnerships with professional teaching artists like those described above help provide such artistic guidance and skill development for classroom teachers.

Philadelphia's Settlement Music School sponsors two programs for early childhood arts integration: the Kaleidoscope Pre-School Arts Enrichment Program and its outgrowth program, the Teacher Training Institute for the Arts. The Kaleidoscope program prepares pre-school aged children for elementary school using an "arts-integrated early learning approach" (Settlement Music School, 2013). Through the use of music, movement, and visual arts, the program seeks to foster skill development and knowledge in literacy, math, and social awareness.

The primary population served by Kaleidoscope consists of children considered at risk and whose parents' income qualifies them for Head Start, but there are also a limited number of students who pay a nominal fee. Research has demonstrated the potential of AI instruction to increase social and emotional competencies for students at risk (Brown et al., 2010) and provides educational equity for multi-cultural students (Goldberg, 1997).

AI professional development at Kaleidoscope is conducted on site and is organized and led by the program's director. Teachers work collaboratively to plan and implement what Bresler (2004) would designate cognitive level AI instruction. The program incorporates music, movement, and visual arts to foster skill development and knowledge in literacy, math, and social awareness. For example, "If the theme is shapes,

then children might label shapes in their early-learning class, choose musical instruments of different shapes, draw shapes in a visual arts class, or make shapes with their bodies through dance or creative movement” (Settlement Music School 2014). This example illustrates the fully integrated approach to early learning at Kaleidoscope. It represents collaborative efforts on the part of the program’s administration and teachers to plan an integrated curriculum around key concepts. The program is unusual because it is conducted on site without the use of outside instructors. The school utilizes its own staff expertise as resources for professional development, as guided by the program director.

The Teacher Training Institute for the Arts is focused on providing pre-school and elementary classroom teachers with guidance, approaches and materials for integrated arts instruction. TTIA also offers a mentoring program that includes workshops and observations of Kaleidoscope classes. TTIA offers these services to pre-service and experienced classroom teachers in public or private schools who wish to integrate classroom curriculum (Alley, 2013).

The above examples of AI professional development programs demonstrate a variety of approaches for teachers to improve their skills in AI design and instruction. Most programs develop partnerships with professional artists or arts organizations so that teachers have the opportunity to develop artistic skills and awareness of quality arts instruction. The programs mentioned above are long-standing and have had success in improving instruction for at-risk students or other target populations.

Chapter Three: Theoretical Underpinnings

Introduction

No intellectual activity is an integral event (is an experience) unless it is rounded out with this [esthetic] quality. Without it, thinking is inconclusive. In short, esthetic cannot be sharply marked off from intellectual experience since the latter must bear an esthetic stamp to be itself complete (Dewey, 1934, p. 40).

In this review of literature, I first include a theoretical foundation for AI within the field of education, in order to situate the HOT program within it. Following is a section on educational theories within AI to further situate HOT within the field of AI, first pertaining to the discipline of AI in general, and then with regard to the HOT program tenets specifically. This review of related literature elucidates key concepts and philosophical perspectives on the nature of education in general and in relation to the arts, all of which contribute to a theoretical foundation for arts integration (AI).

The theoretical concepts pertinent to education and arts integration discussed in this review are: cognitive development as it begins through interaction with the environment, experience, art as experience, aesthetic experience as compared with intellectual experience, imagination, communication, and cultural or contextual meaning. These concepts relate to AI instruction and illustrate the cognitive benefits of the arts in the development of the intellect, the multiple functions of the arts in education, and the potential of the arts to expand learning.

Following the theoretical backdrop based on Dewey, Efland and Eisner will be a discussion of Howard Gardner's Theory of Multiple Intelligences and its application to

AI. Both Dewey and Gardner are named as two of the four educational theorists whose work forms the philosophical foundation for core components of the HOT Schools program. Dewey's educational theory with emphasis on democratic practice plays a major role in the HOT Schools program, where students participate in democratic activities such as the Student Senate. Gardner's theory plays a significant role in teacher AI PD and in delivering arts integrated curricula to students. Knowledge of both of these theorists is necessary in order to better understand the philosophy and vision of the HOT School AI PD program, the object of this bounded case study.

Theoretical Underpinnings for Arts Integration

The philosophies that support AI are based primarily on the educational theories of John Dewey, Elliot Eisner and Arthur Efland, who offer insights into the complex nature of learning and reveal how aesthetic and intellectual experience are intertwined in cognitive progression. An overview of the major contributions of these theorists is included here to inform the reader of the intellectual implications of arts study in order to better understand the focus of this bounded case study on AI PD. These theories help situate the study of arts integration within the fields of educational philosophy and cognitive psychology and provide a context in which we can understand the philosophy, rationale, and vision for arts integration in the schools.

Education and experience. According to Dewey (1938), Efland (2002), and Eisner (2002), all education is experiential and is generated by interaction with the environment. It is through these interactions we form thinking or cognition, and then make symbolic representations of our external environment (Efland, 2002; Eisner, 2002)

The arts provide unique means whereby we can create these symbolic representations or images to express our experience, through visuals, sound or movement. Eisner stated further that the essence of mind (thinking and cognition) is the process of forming representations of one's experience, which he considered "central to growth because experience is the medium of education" (2002, p. 3). If experience is the medium of education, and the arts provide unique means to represent and express experience, it follows that artistic experience is significant in the process of learning.

Dewey called for the need to establish a philosophy of education based on a theory of experience, and asserted that one of the key elements in the learning process is the ability to connect previous and current intellectual experience. Because the arts provide personal relevance for students, they can be an effective means of connecting such experiences.

A key principle of Dewey's theory is "the experiential continuum," (1938, p. 33) which he also referred to as the "category of continuity" (1938, p. 33) and described as a "principle for the philosophy of educative experience" (1938, p. 28). Dewey believed that education should consist of sequential experiences that build on what has previously been learned. He asserted that teachers needed to know their students well enough to be able to provide learning experiences along a continuum built on their previous experience, and further stated, "It is then the business of the educator to see in what direction an experience is heading" (1938, p. 38). The continuum as conceived by Dewey was intended to serve as a guide by providing criteria for determining the educative value of experiences. Dewey did not set down this criteria as a strict formula

by which to determine the value of experiences, but rather specified how he considered experiences in accordance with the continuum to be educative. He explained how each experience is enriched by what has been previously absorbed; every experience influences (either positively or negatively) the attitudes toward further experiences, and to some degree also influences “the objective conditions under which future experiences are had” (1938, p. 37). For example, when a child learns to read or speak, this new skill “opens up a new environment” (1938, p. 37) in which educative experiences can further build. Arts education and AI offer unique environments in which learning can occur, as they provide avenues for personal, symbolic expression that is relevant to past experience. Because of this, the arts may be an efficient and powerful way to generate or reinforce meaningful connections between past, present and future learning and expand the potential for new learning to occur along the experiential continuum.

Intellectual and aesthetic experience: Internal integration fostered by AI. In considering the educational potential of AI, it is useful to examine how the aesthetic experience relates to intellectual activity. Dewey maintained that an intellectual experience has an aesthetic quality of its own and that during the process of thinking, different elements of thought are acknowledged and sorted out as a conclusion is reached. The final result is a consummation of mental activity which is identical to the artistic experience; it differs only in the materials involved (1934). Therefore, art is a quality that permeates an experience and, moreover, any intellectual experience or idea must ultimately have the imprint of the aesthetic in order to be complete (1934).

Dewey further explained that the experience of art was one where the objective

and subjective ways of knowing are intertwined, and cannot be separated (1934). The process of thinking can thus be described as multifaceted, with what Dewey termed “internal integration” (Dewey, 1934, p. 40) which he also described as an aesthetic quality.

Similar to Dewey, Efland (2002) stated that intellectual and aesthetic experience cannot be separated, as they are both elements of one cognitive process. He explained that we have multiple forms of cognition or thought, including categorization, reason, and propositional (language, numbers) and non-propositional (metaphor, perceptual imagery) forms of thought that “emerge from the same common source, the basic level of experience originating in bodily and perceptual encounters with the environment, including culture” (2002, p. 171). Thus, the intellectual and aesthetic qualities of an experience cannot easily be separated. In AI, aesthetic perception or artistic ways of thinking are naturally incorporated in intellectual activity. AI can therefore be regarded as a means toward more complete and refined intellectual experience.

Eisner’s (2002) educational theory also supports AI, as he asserted that aesthetic features are not exclusive to the fine arts. He maintained that an aesthetic experience could occur whenever an individual interacts with any aspect of the world, and suggested that other fields such as science approach learning through an aesthetic lens in order to generate artistic solutions. Eisner also stated that “education can learn from the arts what it means to treat fields as potential art forms, and in doing so the arts become a model for education” (2002, p. 208).

Burton, Horowitz and Abeles (1999) reported that students who engage in quality

arts instruction exhibit “cognitive competencies - including elaborative and creative thinking, fluency, originality, focused perception and imagination” (Burton et al., p. 43), which have been referred to as “habits of mind” (Burton et al., 1999; Hetland et al., 2013). These mental habits, or “dispositions,” (Hetland et al., 2013, p. 39) are fostered by arts study and can be applied to any subject matter.

Hetland et al. (2013, p. 39) described these dispositions as mental habits “that include not only *skills*, but also the *inclination* to use these skills, and *alertness* to opportunities to deploy particular skills.” For example, a student creating a visual work of art realizes the color palette needs to reflect more light, and takes the opportunity to utilize skills in the craft of mixing paint to come up with another color. The student may experiment until the right color is found, consider various options, knowing that there is more than one possible solution, before the final decision is made. Unlike spelling or arithmetic, the arts teach students that “there can be more than one answer to a question and more than one solution to a problem; variability of outcome is okay” (Eisner, 2002, p. 196). A more in-depth discussion of artistic habits of mind will follow later in this chapter.

AI can enhance learning across the curriculum, since aesthetic experience and artistic ways of thought are not restricted to the arts disciplines but are present in and applicable to all subject areas. Furthermore, the transfer of these mental activities can move in both directions, in a symbiotic relationship, from the arts to academics and vice versa (Burton et al., 1999). AI does not guarantee increased academic achievement, but it is apparent that students who are exposed to high quality arts study are more likely to

employ artistic habits of mind in other subject areas than those who are not engaged in such study (Hetland et al., 2013).

Efland (2002) asserted that the ultimate goal of education should be “the maximization of learners’ cognitive potential,” which “requires recognition of the realm of the imagination and the cognitive tools, like categorization and metaphor, that makes its operation possible, in all subjects to be sure, but quintessentially in the visual arts” (2002, p. 155). The arts can provide students with hands-on, experiential education that is relevant to life outside of school and provide continuity to previous and future learning experience as advocated by Dewey (1938). Eisner summed up the integrative power of the arts in stating: “Education can learn from the arts what it means to treat fields as potential art forms, and in doing so the arts become a model for education” (2002, p. 208). Thus, aesthetic experience as applied through AI can strengthen the development and application of artistic dispositions, and expand learning potential in all areas.

Cognition and the imagination: Cultivating imaginative problem-solving.

Engagement with the arts may also encourage imaginative problem-solving skills in non-arts fields such as science, math, engineering, and architecture, to name a few.

According to Eisner, the imagination opens up new possibilities of creation, allows learners to develop and refine their sensibilities, and performs a vital role in the cognitive process by allowing learners to experiment in their minds, without having to actually do so empirically (2002). Similarly, Efland stated that the imagination reorganizes symbolic content such as images, concepts, or words, within one’s mind (2002). He further described the imagination as “the act or power of creating new ideas or images through

the combination and reorganization of previous experiences” (2002, p. 133). Harry Broudy also spoke of the educational power of the imagination and posited that it contained “the raw materials for reasoning of all sorts” (1972, p. 14).

John Dewey stated that “aesthetic experience is imaginative,” and that “all conscious experience has of necessity some degree of imaginative quality” (1934, p. 283). He explained that a person’s interaction with the environment becomes conscious and results in meaningful perception when it is based on previous experiences. The imagination is the means by which such connections are made between old and new experiences; it is “the only gateway through which these meanings can find their way into a present interaction; or rather, the conscious adjustment of the new and the old *is* imagination” (1934, p. 283). In this manner, the imagination plays a crucial role in the learning process; it is a process composed of a series of mental experiences for which making connections, or making meaning, is vital for understanding.

Dewey also observed that art is the outcome of imagination and operates imaginatively rather than in the realm of the physical world (1934, p. 285). Through the imagination, one can envision possibilities and “look at things as if they could be otherwise” (Greene, 1995). Such envisioning is not exclusive to the creation of works of art, but can be fostered through AI and applied to other subjects. For example, when writing poetry students could employ musical concepts to envision the work in different forms by weighing various choices in balance, structure, repetition, and rhythm, and may also use visual art skills to envision the structure of the poem as it will appear to the reader on paper.

In such creative problem-solving, options are weighed and solutions imagined before final decisions are made. In this imaginative realm, new ideas in the arts and other subjects can be created and the potential for the workings of the mind is expanded. The use of the imagination, which can be regarded as an artistic way of thinking, is not restricted to the arts, but is a mental habit that can expand the potential for learning and achievement in other areas (Efland, 2002; Hetland et al., 2013).

AI can provide opportunities to approach all subjects from an imaginative and creative viewpoint. Creativity not only plays an important role in children's learning and social development, but also fosters the creation of community (Isbell & Raines, 2003; Stevenson & Deasy, 2005). Programs that are fully integrated promote a creative classroom, encourage working with community artists, support creative music-making, story-telling, and underscore the importance of talking and listening in groups. Group work such as musical improvisation or art-making become social activities, bringing individuals together for conversation and interactions. Improvisation also allowed students to "own" their music and engage in problem solving and creative expression (Stevenson & Deasy, 2005).

Expression and communication: AI offers modes of non-verbal

communication. According to John Dewey, the goal of art is to communicate an aesthetic experience, and is "the most effective mode of communication that exists" (1934, p. 298). Susanne Langer asserted that art "may be defined as the practice of creating perceptible forms expressive of human feeling" (1966, p. 6). Langer also explained that expression can be viewed in two ways, either as self-expression (of

feelings) or as the presentation of ideas (1966). In AI instruction, the arts can perform both functions of expression, enabling students to communicate their feelings in works of art and to communicate their understandings of lesson content.

Teachers can address learning preferences by utilizing artistic modes of expression to communicate content and express ideas or feelings. Students also express ideas or feelings as they incorporate their personal backgrounds as content in making meaning, and engage in self-expression when this content is fashioned into works of music, poetry, or visual art. Learning thereby becomes more personally relevant; students become more engaged as they are given opportunities to explore their identities and to express themselves (Stevenson & Deasy, 2005). School therefore becomes a place where students are motivated to learn and to succeed. As was mentioned previously, arts-rich programs not only help lower high school dropout rates, they also increase the likelihood that students will continue their education at the college level (Catterall, 2009; Stevenson & Deasy, 2005).

Dewey stated “Because objects of art are expressive, they are a language” (1934, p. 110). He regarded art as “the most effective mode of communication that exists (1934, p. 298) and “the most universal form of language, the most universal and freest form of communication” (1934, p. 282). Furthermore, he posited that when art communicates an experience to the observer, it has the potential to become a significant instructional tool (1934). As such, the arts may offer a means of non-verbal communication that can open up new possibilities for second-language or multi-cultural learners. Children who have difficulty expressing themselves verbally or in writing may find ways to communicate

through art and, conversely, may understand the meanings of works of art independently from language, as art has the capacity to express what cannot be expressed with words.

There is research to support Dewey's view of the communicative power of the arts. Music, for example, can express what might not be adequately conveyed through written or spoken language. Music can communicate the emotional essence of an historical event and in doing so may facilitate greater understanding of human experience. In one example, teachers and students reached "beyond the textbook" (Burnaford et al., 2009, p. 73) in utilizing musical resources to study the Antebellum Period in American history. High school students worked with a professional musician and actor to create jazz poetry based on a narrative the students wrote about a runaway slave, and then set the poetry to music (Burnaford et al., 2009). In this integrated unit, students learned and utilized musical skills to bring an historical period to life, leading the teacher to comment that AI "has helped teachers realize that you can learn things not necessarily in the book" (Burnaford et al., 2009, p. 73).

Utilizing the visual arts young children can easily communicate through drawing what they are unable to express with written language, and they do not differentiate between verbal or visual means of communication until they are taught to do so in school. "To a very young child, for example, drawing and writing are one and the same thing: both are making marks on paper" (Jalongo & Stamp, 1997, p. 98). Second-language learners benefit from AI through the use of visual or kinesthetic modes of presentation. For example, a first grade student with extremely limited English language skills was able to increase his vocabulary through visual art (Gallas, 1994). A talented artist, his

drawings demonstrated in great detail what he had learned in science, but could not express in words. By approaching the subjects of science and language through visual art, the student was able to demonstrate learning and increase his language skills in the following manner:

His visual representations became a catalog of science information and science questions, and that information began to provide material for his involvement in reading and writing and learning a new language. As Juan drew, we built a speaking and reading vocabulary from his pictures, and that vocabulary, together with his interest in representing science, also became the subject matter of his writing (Gallas, 1994, p. 132).

The above reference is a powerful example of how integrated instruction not only offers a mode of presentation and demonstration beyond the confines of language, but it is also important to note that this approach builds upon the student's own talents and interests. In this way, AI can increase the motivation to learn through generating student interest and can help instill students' confidence in their abilities to learn academically and create or interpret works of art in personally meaningful ways.

The examples above illustrate how each artistic discipline offers a unique mode of communication and expression. Through AI, teachers might offer instruction with alternative modes of presentation, which may more readily reach students of diverse learning strengths and cultures. The expressive power of the arts can provide a means of communication from teacher to student, and conversely, students are able to demonstrate academic learning through artistic expression.

AI also offers opportunities for children to gain appreciation and respect for the values and expressions of other cultures and to gain confidence in participation. “Not only do the arts reflect specific cultures, but the way in which the arts are used creatively can help clarify the meanings and values of other cultures” (Bloomfield & Childs, 2002, p. 136). In certain cultures, the arts are community-oriented. The arts are viewed as participatory in African culture (Jalongo & Stamp, 1997), where all members of a community participate in rites and celebrations with integration of music, dance, crafts, and forms of visual arts. In Zimbabwe there is a saying: “If you can talk, you can sing. If you can walk, you can dance” (Jalongo & Stamp, 1997, p. 47).

In the United States, the arts are not necessarily viewed as participatory, but are reserved for those viewed as having special talent and training. We make distinctions between professionals and amateurs, and we distinguish between “singers” and “non-singers,” (Donovan & Pascale, 2004). This type of distinction does not exist in other cultures such as Ghana, where the term music is “a general term referring to drumming, dancing and singing, and it integrated into all aspects of life” (Donovan & Pascale, 2004, p. 63). In such cultures music is a means of communication in which everyone participates, and if American schools would adopt such a philosophy of full participation, students may not be as reticent to join in performance activities. Furthermore, if students are given opportunities to engage in authentic multi-cultural music experiences with non-judgmental communal participation, they may not only develop respect for the arts of other cultures, they may develop more confidence in their own abilities and more enjoyment of such activities.

Cognitive functions of the arts: Promoting cognitive development. Above, I discussed how cognition is related to experience and imagination and how arts engagement may enhance learning. In this section I explore five cognitive functions of the arts involved in higher level thinking skills as delineated by Elliot Eisner (2002). Eisner defined the term cognition as including “all those processes through which the organism becomes aware of the environment or its own consciousness,” including “the most sophisticated forms of problem-solving imaginable through the loftiest flights of the imagination. Thinking, in any of its manifestations, is a cognitive event” (2002, p. 9).

By contrast, Eisner described non-cognitive activity as that “of which we have no awareness” (2002, p. 9). Therefore, according to Eisner, the arts are cognitive and, in keeping with Dewey’s view, may be involved in any experience or interaction with the world around us. As such, the arts can be integrated into any mental pursuit in any subject area, and Eisner’s views thereby provide a foundation for AI. Eisner’s proposed cognitive functions of the arts reveal specific ways in which the arts, or artistic points of view, are applicable in multiple contexts.

The arts provide us with an epistemology; art as a means of perceiving the world around us, a way of knowing. Eisner gave as examples the paintings of Monet, whose use of light provides the viewer with new perspectives on landscape subjects, and the photographs of Paul Strand, whose style highlights the geometrical qualities of industrial cities (Eisner, 2002). In other instances, an artistic vantage point can be applied to architecture or science, where elements of balance and structure are applicable in much the same way as in music or visual art. Knowing through the arts offers a wider range of

possibilities for problem solving than following specific scientific or mathematical formulas, for example.

Additionally, the aesthetic element, or the sense of beauty, adds another dimension to mental pursuits. Howard Gardner reportedly remarked that “the best way to advance education in this country would be to draw teachers toward a more aesthetic treatment of their regular subject matter,” and to “handle some of their non-arts subject matter with greater attention to aesthetics. That is, to esteem, to illuminate quality, to savor, to cultivate the aesthetic experience” (Stake et al., 1991, p. 235). This savoring of the aesthetic is what Harry Broudy (1972) has termed “enlightened cherishing” and is what he described as “the melding of thought and feeling” that occurs when “imagination is disciplined by thought and love is justified by knowledge” (1972, p. vii). Broudy suggested that the aesthetic dimension of learning could be developed and incorporated as major element of general education.

The arts provide opportunities to engage the imagination and consider another person's point of view. Eisner pointed out that this function of art helps foster cultural development. When a work of art is seen as a “cultural artifact” it can inform the observer about a culture that is potentially different from one's own, and in this manner arts study can “enlarge human understanding” (Eisner, 2002, p. 89). For example, the integration of music in social studies can help students develop an understanding of different cultural experiences in the United States such as the period of westward expansion. The music of that period was infused with European folk melody as well as Spanish and Mexican influences. Song lyrics, melodies, rhythms, and instrumental

timbres embody expressive elements of different views of the same historical event: the immigrant experience, the cowhand, the Mexican culture, and the Native American.

Music offers an added dimension to the study of history as it brings the emotional essence of human experience to the forefront. This example of the various perspectives of settling the American West illustrates how the arts offer different viewpoints on the same historical event, and expose students to different points of view. In this sense the arts promote cultural understanding, and may awaken in students the “awareness that theirs is not the only perspective” (Donovan & Pascale, 2004, p. 110).

The arts allow room for the subjective, introspective aspect of our thinking, and help us access personal feelings and forms of expression. Anne Bloomfield, in her studies of AI at the primary school level, observed, “The quickening of the children’s aesthetic sense arises through the awareness of feelings which occur in response to producing or viewing a particular art form” (2002, p. 6). Young children are naturally receptive to the arts, and are able to describe how a piece of music or a painting makes them feel. They are also able to demonstrate these feelings through artistic means, such as movement or singing. Students in an arts integrated elementary school demonstrated introspective thinking and an intuitive knowledge about the nature of artistic expression when they described art in the following ways: “Art tells me something about myself;” “Art is something you can tell to your friends through your work’s expression;” “You express the emotions of your soul when you paint;” and “Art is everyday life. It shows your true colors” (Stevenson & Deasy, 2005, pp. 20–21).

AI offers students the opportunity to explore their sense of self through aesthetic

experience and developing artistic ways of viewing the world. Quality AI and arts study can provide students with the artistic skills and mental habits to adopt an expanded concept of expression, one that includes “expression of concepts, personal meanings, and feelings” (Hetland et al., 2013, p. 118).

The arts provide a means to stabilize or record ideas and images that might otherwise be forgotten. The arts offer a variety of modes to stabilize or record ideas: a student may choose poetry, music, dance or visual art to capture concepts, thoughts and images for clarification, edification or for posterity. For example, visual art can provide students a portrait of life in any period of time, including pre-history. As a student observed when studying cave paintings,

I really liked the way the cavemen expressed themselves. They drew pictures of life the way it was then. It’s almost as if they were keeping themselves and their world alive through their art. We can look at one of those cave paintings and tell what life was like for them. We can see what kind of animals there were (Stevenson & Deasy, 2005, p. 20).

The arts are ways of discovering our inner selves; what moves us, and what we are therefore capable of experiencing. Aesthetic experience allows students to discover their inner selves through their responses to works of art. A thorough arts education will expose children to various works of art: musical, visual, dance, or drama. With teacher guidance, students may develop the capacity to appreciate and evaluate these works objectively, but along the way their subjective response will inform students what moves them, what inspires them. Through the arts, students “can identify strengths they

previously had not known that they possessed, and experience a shift in their own perceptions of themselves” (Burnaford et al., 2009, p. 52). This may be particularly true with regard to high risk students who frequently have little positive personal feedback. The arts offer a means for self-discovery, and without such opportunity, as Ken Robinson has noted, “you may never know what your aptitudes are or how far they might take you” (2009, p. 25).

The cognitive functions of the arts as described by Eisner (2002) illustrate how the arts enhance cognitive development and provide an epistemology for learning that contrasts with the intellectual orientation of traditional academic study. The arts allow for the expansion of mental activity, the development of the imagination, and personal expression and growth. These qualities provide a foundation from which specific mental habits may further be established. The arts foster what have been termed “habits of mind” or “dispositions” (Hetland et al., 2013, p. 39) which have relevance to all academic areas as well as real life situations. Following are descriptions, definitions, and examples of specific habits of mind students may develop through arts study and apply across the curriculum.

Arts Study and Habits of Mind

Arts study and arts integration help students develop “artful thought” (Hetland et al., 2013, p. v), which can be applied to subjects across the curriculum. Arts study also promotes the development of certain habits of mind, or dispositions that are useful in all areas of study and in life. For example: In a visual arts studio, students develop not only the following artistic mental habits, but also the *inclination* to use them and the *alertness*

to know when to apply such skills (Hetland et al., 2013, p. 35). Through AI, these mental habits can be applied to any subject matter, such as social studies. When examining historical artifacts with acute observational skills, one may be able to discern cultural meaning and aesthetic sensibilities that may have been popular at a particular juncture of history, such as the ornate style of Baroque art, music, and architecture. The ability to observe visual details and aesthetic values may thus provide insights into the culture, societal or political values of a specific historical period.

In *Studio Thinking 2: The Real Benefits of Arts Education*, (Hetland et al., 2013) a book that documents the effects of visual arts study on higher order thinking skills, the authors identified “Studio Habits of Mind,” which, over the course of their study of visual arts instruction became a foundation for making connections across the curriculum and also provided starting points for arts integration projects (Hetland et al., 2013). The habits of mind or dispositions fostered by visual arts study are relevant to the other arts as well as other subjects: Develop Craft, Envision, Observe, Reflect, Express, Stretch and Explore, Engage and Persist, and Understand the Artist’s Worlds (Hetland et al., 2013, p. 31). Following are explanations and examples of the eight Studio Habits of Mind.

1. *Develop Craft*: In the art studio, students learn the importance of developing skills and techniques for creating visual art in various mediums. “Every discipline involves craft...” (Hetland et al., 2013, p. 51). Attention to craft and the alertness to recognize mistakes can be applied to other subjects such as language arts or science. It is a disposition that recognizes the value of acquiring and practicing skills and techniques in creating a finished product,

whether working with clay, grammar, or science equipment.

2. *Engage and Persist*: Through arts study, students learn to engage their interests and persist in solving artistic challenges. Self-discipline is needed to practice skills in painting or playing a musical instrument. Students learn to persist through difficulties until problems are solved. In order to become fluent in writing, spelling, in speaking a foreign language or performing on an instrument, one must persist with concentration and engagement. As one ninth-grade student put it, “You can’t expect to be great at it without practicing” (Hetland et al., 2013, p. 42)
3. *Envision*: In visual art, students learn how to “think in images as they come up with an idea, as they progressively re-conceptualize their work, and as they imagine the steps to get there” (2013, p. 60). Students learn to recognize when envisioning is needed, and develop the skill of mental imagery. Envisioning is the ability to create and use mental images to plan a course of action, and it is an important skill for all domains. For example, in studying history it is useful to imagine the mindset of an historical era, or in architecture, sketches or computerized images help to envision what a building will look like when completed.
4. *Express*: The arts express or convey meaning through symbol systems of particular art forms. Meanings are expressed through metaphor or literal representation. Expression can be found in fields other than the arts, such as poetry, prose, drama, or interior design. A visual art teacher in the Studio

Thinking study stressed how he never taught technique by itself, but rather in conjunction with making the work of art a personal expression. “It is about connecting the art to your life and to the world, and your place in the world” (Hetland et al., 2013, p. 56)

5. *Observe*: Artists are in the habit of closely observing their surroundings, other artists’ works of art, and their own works in progress. In the studio, students are taught the difference between looking and seeing, as they observe subtle nuances in shape and color, for instance. Observing is important in other disciplines although it may take other forms. For example, in music one may observe details of orchestration or dynamics by listening rather than seeing. Observations are also important in the sciences, such as observing animal behaviors.
6. *Reflect*: Thinking about the nature of beauty and reflecting on works of art is central to the field of aesthetics. Reflecting involves questioning, explaining, and evaluating works of art. Hetland, Winner et al. (2013) distinguish between two forms of reflecting:
 - a. *Reflect: Question and Explain* - Artists reflect meta-cognitively on their own works and the choices they make with color or technique, or the meanings they choose to convey, etc. Artists also use this form of reflection when engaging in critiques or reviews of other artists’ work. Students in visual art classes learned “to make aesthetic judgments and to defend them, and because they are engaged in continuous self-

assessment, they have the opportunity to learn to be self-critical and to think about how they could improve” (Hetland et al., 2013, p. 65).

- b. *Reflect: Evaluate* – Artists use this type of reflection when they evaluate works of art. This is a sophisticated process that usually involves making comparisons or using a set of criteria to make judgments regarding quality. Such judgments can also involve a certain amount of subjectivity or personal taste, for which there are no established rules. Success in any field requires reflection and evaluation of a finished product, whether historical essay or scientific experiment, for example.
7. *Stretch and Explore*: Artists take risks; they try new things, they experiment, they use divergent thinking and break the rules. “New ideas come from pushing the boundaries” (2013, p. 91). The ability to think creatively and critically and is beneficial to all fields of study. Creativity is a valuable asset in language arts, science, dance, drama, and other fields.
8. *Understand the Artist’s Worlds*: This is the process of understanding art worlds of different historical time periods or different cultures. This habit of mind is divided into two components: Domain and Communities.
 - a. *Domain*: This refers to understanding the full range of arts practices, from pre-history to contemporary art.
 - b. *Communities*: This involves the awareness of and participation in community discourse about art. Students should become

knowledgeable about the dissemination or display of art, and discourse with the so-called “gatekeepers” who decide which works of art are exhibited in galleries and museums (Hetland et al., 2013, p. 6).

The Transformative Nature of the Arts

As students acquire the above mental habits and a refined aesthetic sense in all areas of study, their educational experience may undergo a complete transformation from the traditional classroom approach as the boundaries between disciplines open up, the integrity of each subject is not weakened but rather is strengthened by a broader and deeper intellectual approach to each.

When learning becomes more student-centered, as when students apply personal meanings to arts projects as described above, school becomes a place where students feel they belong and are encouraged to express themselves, and in doing so are making contributions to their own learning (Stevenson & Deasy, 2005, p. 17). For teachers, transformation can take place when new sets of relationships are formed with students through the arts. For example, “a special education teacher at Central Falls High School found that her students saw her in a new light as they watched her apply the techniques she was learning from the teaching artist with whom she partnered” (2005, p. 89).

Transformation can also occur as a result of increased teacher collegiality through AI professional development and collaborative efforts (2005, p. 80). School transformation on a large scale is possible when there is vision, support, shared purpose, and engagement that is meaningful and rewarding through AI (2005, p. 13). When these elements are in place, AI can play a significant role in transforming the learning environment.

The arts carry the potential to transform education; through arts study, teaching and learning become more student-centered as students assume more active roles in their own learning process (Hetland, Winter, Veenema, & Sheridan, 2007; Miller, 2011; Stevenson & Deasy, 2005; Whitelaw, 2012). Stevenson and Deasy (2005) described the transformative effects of arts education in their study, “Third Space: When Learning Matters.”

The term “third space” refers to the contexts and conditions for learning created through art study, which can be viewed as a “space” between teachers, students and works of art. Stevenson and Deasy (2005) observed that teachers and students had moved from the traditional passive curricular orientation to more active, creative roles in this process, thereby transforming the learning environment: “In the third space created by the arts – in classrooms, before and after school programs, and community activities where the arts were present – teaching and learning was student-centered and students became agents of their own learning” (Stevenson & Deasy, 2005, p. 18). Taking ownership of learning is a sign of student growth, and this could manifest itself in social and emotional areas in addition to academics. It might, therefore, be instructive to further examine the affects of AI on student growth.

Student Growth and Arts Integration

Arts instruction exerts positive influences on self-efficacy, engagement, and school attendance (Miller, 2011; Saraniero et al., 2014; Snyder et al., 2014; Stevenson & Deasy, 2005). Educators in the research schools observed that, when students realize they can become a driving force in their own learning, they develop a strong sense of

self-efficacy and confidence that they can make positive changes in their lives (Stevenson & Deasy, 2005). The drama teacher at Hand Middle School in Columbia, South Carolina who observed an increase in personal growth among her students offered this observation: “I don’t think the arts teach self-esteem and confidence; I think the arts *demand* self-esteem and confidence” (2005, p. 32).

Theoretical Underpinnings: Summary

The arts exert a powerful influence on education as they play a crucial role in cognitive development and the refinement and expansion of intellectual skills. Dewey’s assertion that the intellectual and the aesthetic are aspects of the same process of thinking provides a framework for AI, as it illustrates how the aesthetic element is fundamental to any intellectual endeavor. Dewey explained how the process by which we form a complete thought includes an aesthetic element; impressions and pieces of information are sorted out and a conclusion is reached. The internal mental process of reflecting, sorting, prioritizing, and assigning meaning to bits of information involves aesthetic perception. Therefore, any intellectual activity must have the imprint of the aesthetic in order for it to be conclusive; without the aesthetic element, thinking is incomplete (Dewey, 1934).

The arts foster the growth of the imagination (which plays a central role in the cognitive process of mental imagery), making connections between experiences and thereby making meaning. Aesthetic experience is imaginative (Dewey, 1934). The imagination is cultivated through arts study but the use of the imagination is not exclusive to the arts, and it plays an important cognitive role (Dewey, 1934; Eisner, 2002). “The

arts are acts of the imagination, what Maxine Greene calls the ability to envision things ‘as if they might be otherwise’” (Stevenson & Deasy, 2005, p. 19).

Arts study supports the development and use of the imagination, allowing students to explore new possibilities (Stevenson & Deasy, 2005, p. 19). The imagination is not limited to the arts arena, and can be used across subject areas. In order to maximize cognitive potential, educators must recognize “...the realm of the imagination and the cognitive tools, like categorization and metaphor that make its operation possible...” (Efland, 2002, p. 155). Another important function of the imagination is the ability to envision solutions, not only in the arts but in all disciplines.

The arts are a powerful mode of expression and communication and can function as a language to illustrate or express meaning when words fall short. Arts study and AI have the potential to transform education through the development of an epistemology that is expansive and fosters new modes of inquiry, creativity, new ideas, self-knowledge, self-expression, personal meaning, motivation, cultural awareness, communication, and an array of refined thinking skills. Dewey regarded art as the most effective and universal means of communication (1934). Eisner pointed out that communication and representation are important to the growth of culture, and that, ultimately, the arts have the capacity to increase human understanding by revealing meaning in cultural artifacts and communicating these to the world (2002).

All education is experiential; the cognitive process begins as we experience, or interact with, our environment (Dewey, 1934; Eisner, 2002). The internal process of thinking, or cognition, occurs as we strive to find meaning in our experiences (Dewey,

1934; Efland, 2002; Eisner, 2002). Since aesthetic features are not exclusive to the fine arts, it follows that any subject can be approached through an aesthetic lens, leading toward artistic problem-solving and new avenues of understanding (Eisner, 2002; Hallmark, 2011; Hetland et al., 2013; Stevenson & Deasy, 2005). Art is a “way of knowing” and of expressing and organizing/stabilizing/ recording images that might otherwise be forgotten (Eisner, 2002). The arts provide an important means of self-discovery, to understand what moves us, and what we are capable of experiencing (Eisner, 2002).

The arts have the potential to transform education by creating a classroom culture in which learning is student-centered and project-based, where students work collaboratively to solve problems (Burnaford et al., 2009; Stevenson & Deasy, 2005). Through the arts, students are able to take a more active role in their education where there is more personal meaning (Hetland et al., 2013; Miller, 2011; Stevenson & Deasy, 2005; Whitelaw, 2012). AI also provides opportunities for collegial experiences as arts specialists and non-arts classroom teachers work together toward common goals (Garrett, 2010; Saraniero et al., 2014; Stevenson & Deasy, 2005).

Research has revealed social benefits to integrated arts study. It is particularly beneficial to students from disadvantaged backgrounds and second language learners, as it provides new modes of presentation and cultural relevance (Brown et al., 2010; Miller, 2011; Stevenson & Deasy, 2005). AI curriculum increases student motivation and has resulted in decreases in behavior issues and absenteeism, as students are more fulfilled and interested in what they are studying, and they have an increased sense of confidence

and fulfillment in making a contribution to the community of learners (Miller, 2011; Stevenson & Deasy, 2005). Arts study fosters communication and builds community through artistic and academic partnerships and group projects in which students share their work (Hetland et al., 2013; Stevenson & Deasy, 2005).

An important effect of arts study is the development of certain artistic habits of mind, which can transfer to other subject areas and can also be a significant influence on how individuals deal with real life issues beyond the school environment (Hetland et al., 2013). For example, in a visual art studio, students utilize the dispositions of observing, envisioning, reflecting, expressing, exploring, engaging and persisting, and understanding art worlds. Other habits of mind developed by art studio teachers are: developing craft, engaging and persisting, envisioning, observing, reflecting, stretching and exploring, and understanding art worlds (Hetland et al., 2013).

The above literature offers examples of how arts study allows students to explore their interests and in doing so discover their strengths. It also provides teachers with modes of instruction to build upon those strengths (Koba, 2015a). These strengths are often referred to as “intelligences” within the context of Howard Gardner’s Theory of Multiple Intelligences (1983). The arts have been linked to four of the seven intelligences identified by Gardner: linguistic, musical, spatial, and bodily-kinesthetic (Goldberg & Scott-Kassner, 2002). Gardner’s theory has inspired much debate about the nature of intelligence (Goldberg & Phillips, 1995), defined by Gardner (1983) as an ability to solve problems or to craft something of cultural value. It may be useful here, therefore, to take a closer look at Gardner’s views and consider how his Theory of

Multiple Intelligences might accurately fit into a framework for AI.

The Theory of Multiple Intelligences: Does it Support AI?

Authors often rely on Gardner’s Theory of Multiple Intelligences as a theoretical foundation for AI instruction (Beatty, 1995; Catterall, 2009; Catterall & Waldorf, 1999; Garrett, 2010; Miller, 2011; Silver, 2012; Smith, 2005; Venzen, 2011). The HOT Schools program and other AI programs also reference the Theory of Multiple Intelligences as their theoretical justification (Koba, 2015a; North Carolina Arts Council, 2014; The Galef Institute, 2014). Depending on how the theory is applied, this can be accurate or not: A careful reading of Gardner reveals considerable caution on the subject of integration, and that Gardner “did not intend his work to be interpreted as suggesting that one subject area be used to teach another area, rather that students should have the opportunity to learn through each of the intelligences” (Goldberg & Scott-Kassner, 2002, p. 1056).

Gardner rarely uses the term integration, and prefers the term “interdisciplinary” (2008, p. 53) when discussing any combination of subjects. He emphasizes discipline-specific skills and asserts that each subject should be mastered in and of itself, and when integrated, there should be

...the proper combination of at least two disciplines. Moreover, at least in the ideal, the two disciplines should not be merely juxtaposed; they should be genuinely integrated. Such an integration should yield understanding that could not have been achieved solely with either of the parent disciplines. (Gardner, 2008, p. 53)

From this statement it would appear that Gardner supports only the highest level of integration, defined by Bresler in her ethnographic study of AI practice (1995) as co-equal or cognitive. As such, this style of integration would only be used when absolutely necessary to achieve instructional goals. The inclusion of Gardner in theoretical frameworks for AI studies might then require further explanation than the customary listing of the intelligences and their definitions. It may also be appropriate to describe the intelligences as avenues for modes of presentation that address various learning styles.

In *Intelligence Reframed* (1999), Gardner answers common questions about his Theory of Multiple Intelligences. Questions relating to habits of mind may be worth mentioning here since this topic relates to studies described in this review in which habits of mind gained from arts study were seen to be transferable to other subject areas (Hetland et al., 2013). Among the questions asked were, “What of a general capacity called critical thinking? Isn’t it important in today’s society? Shouldn’t we have courses that help youngsters develop this faculty?” (1999, p. 106). Gardner responded that he considered critical thinking skills to be valuable and then added, “But I doubt that there is a particular form of thinking called critical thinking” (1999, p. 106). Instead, Gardner pointed to discipline-specific critical thinking skills and maintained that these thinking skills must be developed in each domain, according to the particular demands of that domain, and that these skills are not transferable into other domains (1999, p. 107).

Gardner presented discipline-specific or domain-specific skills, suggesting that the arts are “entry points” or “gateways” to instruction. He presented a set of seven “entry points” as a bridge from the theory, each of which can be “roughly aligned with

specific intelligences” (1999, pp. 169–170):

1. *Narrational*: This addresses students who have an interest in learning through stories, which can be presented linguistically or through film.
2. *Quantitative/Numerical*: This entry point reaches students who like to learn through numbers, patterns, size, shape, and various operations that can be performed.
3. *Logical*: This entry point appeals to those who have the capacity to think deductively, and learn well through syllogisms.
4. *Foundational/Existential*: This is interesting to students who like to grapple with fundamental, philosophical kinds of questions, which can be addressed through myth and art.
5. *Aesthetic*: This gateway is meaningful for students who are inspired by works of art, and are sensitive to balance, harmony, and composition.
6. *Hands On*: This is an effective approach for students who respond well to complete active engagement with a topic, such as conducting an experiment or building a model.
7. *Social*: This is an appropriate entry point for those who learn best in a group setting where brainstorming, role-playing, interaction or observation of others can take place.

The following definitions by Thomas Armstrong from his volume, *Multiple Intelligences in the Classroom* (2009), may provide additional clarification. Armstrong, a special education teacher, has provided educators with resources to help implement the

Theory of Multiple Intelligences in the classroom. He described the intelligences as follows: *Linguistic* (the ability to use words effectively, including syntax, phonetics, rhetoric, mnemonics, explanation and metalanguage); *Logical-mathematical* (the capacity to use numbers effectively and to reason well); *Spatial* (the ability to perceive visual-spatial world accurately, with sensitivity to color, line, shape, etc.); *Bodily kinesthetic* (ability to use one's whole body to express ideas and feelings); *Musical* (the capacity to perceive, discriminate, transform and express musical forms, with sensitivity to rhythm, pitch or melody and tone color or timbre); *Interpersonal* (the ability to perceive and distinguish moods, intentions, motivations and feelings of other people, through facial expressions, voice and gestures, and to respond appropriately, and to influence a group of people in a pragmatic way); *Intrapersonal* (self-knowledge and the ability to act adaptively on the basis of that knowledge); and *Naturalist* (expertise in the recognition and classification of species of flora and fauna, natural phenomena and inanimate objects in the environment).

Gardner's idea that intelligence is not one general capacity, but rather a series of specific intelligences, has been widely influential in the field of education and has served to raise the position of the arts in the schools. These intelligences are linked to specific skills in each domain that Gardner regards as non-transferable. The various intelligences as defined by Gardner are useful as modes of presentation to catch the attention of students with various learning styles and interests; however, presentation is not equivalent to integration. In addition, the entry points delineated by Gardner offer a bridge from the theory to specific styles of presentation to further reach students with

particular interests.

In “Five Minds for the Future,” Gardner pointed out that interdisciplinary investigation can be valuable in the workplace within the following three scenarios (2008, pp. 56–58):

1. A powerful new concept has been developed, and it is inviting and timely to test the reach of that concept.
2. An important phenomenon has emerged, and a full understanding of that phenomenon calls for, even demands, its contextualization.
3. A pressing problem emerges, and current individual disciplines prove inadequate to solve that problem.

Gardner thereby supported the necessary application of interdisciplinary work in the professional world. In terms of instructional practices, however, he was critical of discussions of interdisciplinarity for instructional practices in the schools, and the ways in which it might be applied in the classroom. As evidenced in Gardner’s writings, he emphasized discipline-specific skills and approached the subject of integration with caution, writing explicitly about how and when integration should be implemented in the classroom. The following quote demonstrates Gardner’s position on what is typically regarded as integration (significantly, he did not use that term) in the elementary classroom:

The dangers of inadequate synthesis are perhaps most manifest when it comes to interdisciplinary work. To begin with, much activity in the early years of schooling is misleadingly labeled as “interdisciplinary.” Children may well

benefit from carrying out evocative classroom projects or from pursuing a unit on generative topics like “patterns” or “water” or the “cradle of civilization.” But these endeavors do not involve disciplines in any legitimate sense of that term. In making a diorama or a dance, in thinking of water or cities in a variety of ways, students are drawing on common sense, common experiences, or common terminology and examples. If no single discipline is being applied, then clearly interdisciplinary thinking cannot be at work (2008, p. 55).

In order to correctly represent the work of Howard Gardner, then, it might be more accurate to say that the Theory of Multiple Intelligences provides the groundwork for understanding special abilities, interests, or learning preferences rather than a theoretical basis for integration. The learning preferences as identified by Gardner can be addressed through various modes of presentation to reach a diverse community of learners and provide entry points or gateways to learning. Building upon these learning preferences as a starting point, one can then move beyond Gardner’s framework in the direction of integration.

Summary

This review of the literature has illustrated the cognitive nature of the arts and their impact on intellectual development (Dewey, 1934; Efland, 2002; Eisner, 2002). The presence of an aesthetic quality in our natural thought process implies that arts study can foster certain thought processes and habits of mind to enhance learning in other subject areas (Dewey, 1934; Efland, 2002; Eisner, 2002). The long-held view of the arts as non-cognitive has given way to an understanding of the true cognitive nature of the arts and

the higher level thinking entailed in arts study (Efland, 2002; Eisner, 2002).

Integration of the arts with the so-called academic subjects offers new modes of inquiry, hitherto unforeseen solutions and clearer understandings for diverse learners (Bresler, 1995; Brown et al., 2012; Garrett, 2010; Stevenson & Deasy, 2005; Venzen, 2011). The arts expand students' knowledge of culture, create community, provide avenues for self-expression, and ultimately aid in students' discovery of themselves (Eisner, 2002; Hetland et al., 2013; Stevenson & Deasy, 2005). All of these elements are possible in a fully integrated curriculum where the arts are treated as equals to other subjects. It is therefore important that teachers receive appropriate professional development to create and sustain integrated arts programs, as a few studies have shown (Garrett, 2010; Hallmark, 2011; Patteson, 2005; Saraniero et al., 2014). Teachers who understand the true nature of arts study and are equipped with artistic skills, teaching strategies, and collaborative opportunities will be better prepared to successfully implement and sustain quality AI programs in the schools (Garrett, 2010; Hallmark, 2011; Patteson, 2005; Saraniero et al., 2014; Snyder et al., 2014; Stevenson & Deasy, 2005).

The literature demonstrates the importance of teachers obtaining the necessary skills to implement quality AI programs, and the need for teachers to know the types of AI professional development available in order to make informed decisions concerning the nature of AI professional development experience. There is limited literature on teacher experience in AI professional development (Garrett, 2010; Hallmark, 2011; Patteson, 2005; Saraniero et al., 2014; Snyder et al., 2014) and while these studies offer

insights on successful programs, more research is needed to inform the educational community of a variety of best practices in AI PD and the implementation of AI programs in the schools. The next chapter delineates the parameters of the proposed case study on AI professional development experience from the perspectives of specialists teachers, classroom teachers, and administrators who have engaged in the Higher Order Thinking (HOT) Schools professional development program, and who have implemented and sustained a successful AI program from 1994 to the present time.

Chapter Four: Methodology

Purpose of the Study

The purpose of this case study was to examine the Higher Order Thinking (HOT) Schools Professional Development Program in order to better understand the aims of the program and the experiences of the teachers who participated. To do so, I assumed a phenomenological stance where I sought to gain a fresh perspective of professional development by setting aside my previous understandings of both music education and professional development, and by taking into consideration the multiple and varied views of the teachers and other participants. It was appropriate then, to draw upon Stake's (1995) approach to case study methodology that utilizes "naturalistic, holistic, ethnographic, phenomenological, and biographic research methods" (1995, p. xi). According to Stake (1995) the purpose of case study research is to examine "the particularity and complexity of a single case, coming to understand its activity within important circumstances. By investigating the particularities of the HOT Schools Professional Development Program, it was my intention to expand upon current understandings of professional development as related to the successful implementation of arts integration programs.

In this study, I also utilized interpretive and constructivist approaches in accordance with Stake's description of the role of the researcher as "interpreter, and gatherer of interpretations..." (1995, p. 99). The themes and issues that emerged in this case were identified through my interpretations of teacher narratives and observations of PD activities. These interpretations were then analyzed to construct a view of the HOT

Schools AI PD program and the overall experiences of the program participants.

An understanding of this case was further informed by theoretical underpinnings that support a foundation for AI within the field of education as discussed in Chapter Three. These included the work of John Dewey (1916, 1934, 1938); Arthur Efland (2002), and Elliott Eisner (2002) who articulated the intertwining of aesthetic and intellectual experience, and discussed the cognitive benefits of arts study, as well as Howard Gardner's Theory of Multiple Intelligences (1983). Because the HOT Schools program specifically draws upon the theories of John Dewey (1916, 1934, 1938), Howard Gardner (1983), Benjamin Bloom (1956), and Joseph Renzulli (2014) in its theoretical framework, their ideas will most specifically inform this case. The examination of these theories was offered to provide a deeper understanding of the program's goals and objectives in the design and implementation of PD for teachers and other stakeholders of the HOT Schools program.

The bounded system of this case study was the HOT Schools PD program which included the teachers and other educator participants of the 2015 HOT Schools Summer Institute in Hartford, Connecticut, the 2015 HOT Schools Orientation Day, at the John Lyman School in Middlefield, Connecticut, as well as other forms of ongoing PD offered by the HOT Schools program throughout the school year including: HOT Blocks, Peer Partner In-Service Days, Leadershops, and Teaching Artist residencies.

Research Questions

The primary research questions of this study were:

1. What are the educational philosophies, goals, and objectives of the Higher Order Thinking (HOT) Schools, and how do these relate to the professional development of educators?
2. How is AI professional development carried out using the HOT Schools approach?
3. What are teachers' experiences in the established HOT School environment?

Research Design

The research design of this study is based upon case study methods set forth by Stake (1995). This form of inquiry emphasizes approaches that are naturalistic, holistic, ethnographic, and phenomenological (1995, p. xi), and involves the in-depth evaluation of a particular case for the case's sake, rather than as a means to help us understand something else outside of the case itself. Said differently, the aim of case study research is to obtain a "greater understanding of the case" (Stake, p. 16).

This research was conducted as a single case study in which I observed the unique AI professional development experiences of teachers in ongoing professional development through the HOT Schools program and is a bounded case study because it is focused solely on that educational community (Stake, 1995). The unique aspect of this bounded case study is the professional development occurring within the context of the HOT School approach, which is adaptable to unique school settings, populations, and

needs (Koba, 2015a). This case study is “holistic” because the “contextuality is well developed,” (Stake, 1995, p. 47), as it has sought to understand the HOT Schools professional development experience of classroom and arts specialist educators through the unique and ongoing professional development structures of the program.

The intent of the study was to inform the educational community about teacher experience in HOT AI professional development through a “non-comparative study” (Stake, 1995, p. 47). Case study is an appropriate paradigm when the intent is to understand the “uniqueness and complexity” (Stake, 1995, p. 16) of a case and its pertinent “issues” (Stake, 1995, p. 16). This study may be classified as “empirical,” (Stake, 1995, p. 47) as the research was “field oriented” (1995, p. 47) with emphasis on “observables” (1995, p. 47) in arts integration professional development activities. The empirical nature of the study is reflected by the two primary methods of data collection, interviews with participants and observations of AI activities. The research conducted is considered empirical also because the observations of professional development activities were “naturalistic and non-interventionist, with the researcher observing the interactions of the participants without interference” (Stake, 1995, p. 47).

It is important to note that, while I have provided theoretical underpinnings for arts integration philosophies in general and for HOT Schools in particular in the previous chapter, these theoretical understandings are treated in this study as a means for understanding the unique case, but not as a lens through which to analyze or interpret data. I have, therefore, developed research questions that are specific to the case and that facilitated the emphasis on “observables” rather than imposing a theoretical framework

that might interfere with my openness and attention to phenomenological experience.

Stake (1995) has pointed out that the principle use of case study is to “obtain the descriptions and interpretations of others” (p. 64). To this end, I utilized semi-structured interviews with open-ended questions in order to facilitate more detailed descriptions of the program experience and to allow for the possibility of new insights or issues not anticipated by the researcher.

Site Selection: The HOT Schools Professional Development Program

I have chosen the Higher Order Thinking (HOT) Schools AI professional development (PD) program as the subject of this study because it sets itself apart from others in several ways. First, the PD is not exclusive to teachers, but includes all the stakeholders in the educational community: teaching artists, classroom teachers, arts specialist teachers, administrators, and parents. This comprehensive approach helps build a large support structure to ensure the strength of the program in all facets of the child’s education.

Second, the professional development is offered in many forms and levels of instruction, from one-day seminars to week-long summer institutes. This is important to note because teachers have many choices to address their potentially changing needs throughout the school year. These various forms of PD are structured to serve different purposes. For example, a weekend mini-institute might reinforce concepts learned at the summer institute or highlight best practices, whereas a convening would provide collegial support and a platform for discussion of pressing issues (Koba, 2015a). Third, the PD is ongoing and can be tailored to the unique needs and resources of each school setting. As

a result, no two HOT schools are exactly alike, but vary according to the strengths, interests, and various demographic aspects of each school community. My interest in conducting a case study of the HOT Schools AI PD program was met with enthusiasm and supportive gestures. The program directors welcome research to disseminate information to the public about the work they do and the contribution they are making to the field of education. Additionally, the HOT School program's location in Connecticut was in close proximity to my home state of Pennsylvania, making it easily accessible for research.

Participant Selection

Participants in the study were chosen on the basis of their participation in the HOT Schools PD program, whether as an arts specialist teacher, classroom teacher, teaching artist, special education teacher, workshop presenter, program director, principal, or parent, each a member of a HOT Schools educational community. There were a total of 24 individuals who participated in interviews; specifically, there were four HOT program directors, seven classroom teachers (three of whom were also presenters at the Summer Institute), two arts-specialist teachers (one of whom was also a teaching artist), four other teaching artists, one special education teacher, one principal, three professors, a program evaluator, and one parent. There was some overlap in these demographics, which meant that a few participants offered more than one perspective on HOT Schools experience: three of the teachers were also workshop presenters, two of the teaching artists were former HOT School teachers, and two teaching artists and one program director were former HOT School parents. These individuals participated in

either the HOT Summer Institute, the Orientation Leadership at John Lyman School, or responded to the researcher request for interview via the online questionnaire. The majority of participants were those whom I met at the Summer Institute and who volunteered to be interviewed on site. Other interviews took place at the John Lyman School or over the phone.

I also observed three single-session workshops and one multi-session sequential learning track at the Summer Institute. The single session workshops were two or three hours in length and were titled “Deep Learning: Arts integration as a strategy to understand, apply, analyze, evaluate and create;” “HOT Blocks: Cross-curricular collaborations;” and “Art vs. artifact.” The sequential learning track consisted of four three-hour sessions over four days and was titled “Multiple intelligences – Multiple solutions.” The classes ranged in size from approximately 15 to 20 participants.

Data Collection

In this study I documented the HOT School professional development experience from the perspectives of arts specialists, classroom teachers and other educators named above from their initial participation in the program to the present time. The research focuses on teachers’ experiences of personal and professional growth as a result of HOT School AI professional development.

Data collection for this study took place over a period of six months. The research was conducted in three phases: an online questionnaire distributed via Survey Monkey, followed by interviews with participants and observations of activities three months later at the Annual 2015 HOT Summer Institute in Hartford CT, and finally,

interviews with program directors and observations of classes and activities at the annual HOT Schools “Leadership” Orientation at the John Lyman School in Middlefield, CT. For a complete timeline of the data collection process see Appendix B.

Phase 1: Questionnaires. The first phase of data collection involved an online questionnaire created and administered via Survey Monkey. The questionnaire was sent to initial participants including both arts specialist and non-specialist teachers at two established HOT schools. The purpose of the questionnaire was to collect background information on teacher experience in HOT Schools PD and to recruit volunteers for interviews. The reason for the online approach was the expectation that teachers would feel comfortable answering questions anonymously and at their convenience. An introductory letter explaining the research topic and containing a link to the questionnaire was sent to the principals of each school who then distributed them to their faculty.

The questionnaire contained a total of 16 questions; the first seven pertained to educational background, subjects or grade levels taught, and years of teaching within the HOT School program. The next seven questions asked teachers to reveal their attitudes toward arts integration and such experience both prior to and after participation in HOT School professional development. The last two questions invited participants to volunteer for an interview and requested their contact information. Please refer to Appendices C and D to view the questions.

The response was disappointing, not so much in the number of respondents (18 from among a faculty of 55) but because the questions pertaining to attitudes and thoughts on arts integration and the HOT program were left unanswered by 50% of

respondents. This method was also disappointing as it yielded only one interview; of the six teachers who indicated a positive response for an interview, only one followed through. Based on these results, I concluded that face-to-face contact was a more efficient way of recruiting participants for the study.

The reason for the lack of response was not immediately clear, but became clearer after I attended the HOT Summer Institute where I learned firsthand that not all schools partake of all the HOT professional development offerings, nor are they equally invested in all three tenets of the HOT program. One of the hallmarks of the HOT Schools program is its flexibility and adaptability to a variety of educational communities. I learned through my research that, although the flexibility is advantageous, it could also engender weaknesses in the program if a school is not completely committed to the HOT professional development process. One of the challenges in a program that is somewhat non-prescriptive is to maintain quality and consistency while schools tailor the program to suit their specific educational needs. To this end, the HOT program leadership has developed a Continuum of Participation (See Appendix N), “a guide that helps schools identify their current depth of practice toward becoming a Higher Order Thinking School” (Koba, 2014b). This is one of the many ways in which the HOT program leadership provides consistent support and is continually developing new strategies to foster strong programs in all HOT schools. This topic will be discussed in more detail in Chapter Five.

Phase 2: HOT Summer Institute. Based on the limited results of the online questionnaire, I refocused my data collection toward observations and interviews, and

chose the annual HOT Summer Institute as an opportunity to make face-to-face, personal contact with potential participants for my study. The HOT Schools 22nd Annual Summer Institute took place from July 13–17, 2015 in Hartford, Connecticut. The Institute was a weeklong conference during which participants chose from a variety of daily workshops, sequential learning tracks (daily three-hour sessions for four days), lectures and performances.

In contrast to the above online communication, the Summer Institute proved to be a rich environment for data collection. I began by observing workshops, sequential learning tracks, and “Informances” offered throughout the week. As a non-participant observer, I took field notes by hand and made efforts not to interrupt or impede the flow of professional development activities. As I looked for opportunities to engage in conversation with Institute participants, I noticed how the individuals with whom I spoke were enthusiastic about the program and their respective roles in it. Most expressed the desire to help make the program better known and better understood by sharing their personal experiences with me. Altogether there were 21 participants at the Summer Institute who volunteered to be interviewed, and I was able to conduct six of the interviews on site. Subsequent interviews took place by phone over the next seven weeks following the institute.

Participant interviews were “semi-structured” and contained both “open-ended (i.e. divergent) and closed (i.e. convergent) questions” (Gay, Mills, & Airasian, 2009, p. 371). This form of interview allowed participants to emphasize important elements of their experience that I could not have anticipated. The open-ended questions generated

detailed narratives with key insights related to arts integration professional development.

Following the Summer Institute, I contacted participants via the email addresses they had provided, and gave each a range of dates and times from which to choose for their interview, whether by phone or Skype. All chose to be interviewed by phone, and those who had the most restrictive schedules were accommodated by additional choices in terms of date, time, and length of interview. At the beginning of each interview, I stated that the questions were intended to provide some structure as jumping off points for meaningful, individual expression. In some cases this led to subsequent questions related specifically to the unique narrative in progress. These were not intended as leading questions but rather to clarify or expand the points being made. For interview protocols, please see Appendices E and F.

Phase 3: HOT Leadership Orientation Day. The third phase of data collection took place at the annual Orientation Day and “Leadership” held at the John Lyman School in Middlefield, CT on October 21, 2015. A “Leadership” is a one-day workshop hosted by a Connecticut HOTS School and program staff to share best practices and illustrate the HOTS approach for educators considering joining the program. Leaderships take place throughout the school year, and on this occasion was focused on orientation for educators new to the HOTS program. Data collection took place at the workshop through observations of integrated arts classroom instruction and interviews of participants.

I conducted two more teacher interviews as a result of contacts made during the orientation, at which I also observed classes, received a student-led tour of the school,

heard a student performance of a welcome song written by the students, and participated in group activities. I also interviewed the Director of HOT Schools, Bonnie Koba, and the HOT Schools Implementation and Operations Specialist, Kim Renee Thibodeau. In this case the interview protocol was designed specifically for HOT Schools program directors, and featured open-ended questions as was the case with previous interviews with other educators active in the HOT Schools program. For interview protocols, please see Appendices G and H. At Bonnie Koba's request, her interview took place in person at the John Lyman School, and Kim Thibodeau was interviewed over the phone four weeks later, at an agreed-upon date and time. During the week prior to the Orientation Day, I also interviewed Amy Goldbas, Associate Director for Program Design.

Demographic profile. The demographic profile of the 24 participants reflects a wide range of professional roles in the HOT educational community. The majority of interviewees were drawn from the pool of participants in the HOT program's annual Summer Institute, a weeklong event offering daily workshops, sequential learning tracks, lectures and performances. It was expected that the participants would be primarily teachers, but the resulting group of participants represented a total of ten different categories. In certain cases there was an overlap between roles in the HOT educational community, delineated as follows:

1. Classroom teachers: 7
2. Arts specialist teachers: 2
3. Special education teacher: 1
4. Public School Administrator: 1

5. Teaching Artists: 4 (includes 1 specialist teacher from above)
6. HOT Program Directors: 4
7. Program Evaluator: 1
8. Parents: 4 (1 now a director, 2 previous teachers now TAs, 1 non-HOT high school teacher)
9. Presenters at Summer Institute: 7 (includes 3 teachers, 1 program director)
10. College professors: 3

Bias, Trustworthiness, and Validity

As a music teacher in the Pennsylvania public schools, I have encountered academic and administrative biases and challenges related to teaching a “non-academic” subject. For example, on many occasions specialists are asked to release students from classes so that they may finish a math or science test. Music activities have become increasingly restricted during PSSA testing, with the scheduling of concerts forbidden during the 6-week testing period. Over the years, I have made efforts to connect aspects of the music curriculum with social studies and art courses, particularly at the middle school level, but the lack of common planning time and shared goals made full integration impossible. These experiences represent the biases I bring to the research, however I endeavored to put these aside and study AI PD as it is fundamentally different than the non-sanctioned arts integration I attempted at my school.

In order to ensure trustworthiness and validity in this study, I utilized appropriate procedures as set forth for qualitative research by Stake (1995); Gay, Mills, and Airasian (2009); and Cresswell (2007). Because case study research is subjective;

misinterpretation of data due to bias or other shortcomings by the observer is a possibility that can be avoided through triangulation of sources (Stake, 1995, p. 45). In this study, interviews were conducted with teachers, professional teaching artists, school administrators, and HOT program directors, in order to provide descriptions and observations that might have been missed by the observer (Stake, 1995, p. 64). An essential element of case study was the interpretation of different views or perspectives of the same program or phenomenon, which in this case was the teachers' experience in the Higher Order Thinking (HOT) Schools PD program. Through examination and interpretation of various views of the PD experience, themes and issues emerged. As the study progressed, larger categories or overarching themes and issues came to light. In certain instances, emergent themes led the research in new directions of discovery, and the research questions evolved accordingly. The utilization of open-ended questions during interviews provided opportunities to gather information not previously anticipated and served to better answer the "overarching question" (Creswell, 2007, p. 108) of what constitutes effective AI PD in the HOT Schools Program.

In order to avoid inaccurate interpretation, the triangulation of sources helped to substantiate an interpretation or clarify its meaning (Stake, 1995). In this study, multiple sources of data were collected: questionnaires, interviews, observations, and various artifacts from the directors of the HOT program. Data were analyzed and compared between the sources to ensure validity. I also utilized "member checks" (Gay et al., 2009, p. 376) by participants to ensure the accuracy of interpretation. All participants in the study were sent a copy of their interview transcript to check for accuracy of their

comments. The study has provided “detailed descriptive data” (Gay et al., 2009, p. 376) from participant interviews and observations of classroom activities to convey findings. These strategies helped to achieve accurate interpretation and description of AI professional development as provided through the HOT Schools program.

Chapter Five: Research Journey

Introduction

In this chapter, I provide an overview of the processes for collecting, analyzing, and organizing the findings to offer a reasonable compilation of data related to teacher experience in the HOT AI PD program. The overview of the data collection process chronicles my research journey as I investigated various sites related to the HOT Schools programs. In the telling of this story, I provide important contextual information including elements and key aspects of the HOT Schools program as described through official artifacts and my observations of the events. A description of the data analysis process is then included.

Methods of Data Collection

Questionnaires, interviews and observations, were the three methods used to collect data. The themes and issues were coded using a color scheme in order to identify them as they appeared in the three forms of data and as an aid in the final analysis (see Appendix K). Of the three methods, the semi-structured interviews fostered the most detailed and rich descriptions of the HOT professional development experience.

Data collection phase I: Questionnaires. The first phase of the data collection process began with the deployment of the online questionnaires. The responses yielded limited data on HOT PD and related teaching experience. While the respondents indicated that they had positive experiences in arts integration through the HOT program, most gave one-sentence answers that lacked sufficient detail. This may have been

because the responses were written rather than spoken, and there was no face-to-face interaction with the researcher allowing for friendly, supportive communication to draw out additional information. Teachers admitted later on in interviews at the Summer Institute that this particular school implemented only one strategy of the HOT Schools program, the common planning periods called HOT Blocks, so that could have been the reason for the limited response.

According to HOT Schools Director, Bonnie Koba, and Associate Director for Programming, Amy Goldbas, not all HOT schools participated in the program to the fullest extent for various reasons; it was therefore acknowledged that PD might not be as extensive at some schools as others where the program was more fully implemented. For the above reasons, I decided not to employ the questionnaire at future research sites and instead chose to rely on direct observation and in-person interviews at both the Summer Institute and John Lyman Orientation Day.

Data collection Phase II: Observations and interviews at the Summer Institute. The second phase of data collection took place at the annual HOT Summer Institute, where I conducted observations and found many teachers willing to be interviewed. My observations of PD sessions and conversations with participants allowed me to witness that the teachers were enthusiastic about the variety of workshop offerings, the hands-on techniques they experienced in the workshops, and the sequential tracks that offered in-depth study through a series of daily sessions over a four-day period. The HOT Schools Summer Institute was well-attended, and this week-long professional development conference proved to be a viable site to interview a large number of HOT School

educators, administrators, artist teachers, workshop leaders, and other stakeholders. I describe this diversity of workshop participants in an excerpt from an article I was asked to write for the HOT Schools newsletter describing my experience as a researcher there:

I expected the institute to be well attended by teachers seeking new strategies for integrating the arts in their classrooms. What I did not expect was the range of professions and involvements that exemplify the HOT Schools community. I expected to meet teachers who might share their experience in the HOT Schools program, but found myself talking with a professional storyteller, a songwriter and singer, a professor and certified movement analyst, an arts-integration coach, a project-based learning director, a parent of a HOT School student, an elementary school principal, a native instrument educator, and so many more who represent the larger HOT Schools educational community. All were gathered together with the common purpose of expanding learning potential through the arts. I knew that one of the key attributes of the HOT Schools mission is to include all stakeholders of the educational community, but I did not expect such diversity of involvement at the Summer Institute (Landley, 2015).

Data collection phase III: Observations and interviews at HOT Orientation and Leadershop. The third and final phase of data collection took place at the Orientation Day at John Lyman School. This one-day workshop was also referred to as a “Leadershop” where experienced HOT Schools teachers shared best practices by opening their classrooms to new or prospective HOT Schools teachers. A Leadershop is a collaborative effort between an established HOT School and HOT Schools staff to

showcase HOT strategies that have been tested over time, and to build leadership skills among the teacher presenters (Koba, 2015a). I decided it was important to attend this event in order to observe a well-established, successful HOT School in action, and to seek additional contacts with teachers and program directors with the potential for interviews.

This event afforded me the opportunity to experience the charged atmosphere of a HOT school in action. The energized environment at John Lyman was evident in the proud deportment of our student guides as they enthusiastically explained the hallway displays of student work, the physical layout of the school with designated areas for special endeavors such as a garden, the well-equipped playground, and the library. Visitors were warmly welcomed into classrooms by teachers and students who seemed to genuinely enjoy sharing their arts-integrated lessons.

At the time of this study, the Orientation Day at John Lyman was an annual event intended to introduce new or potential HOT School participants to a fully implemented HOT School and to provide opportunities for experienced HOT Schools teachers to observe colleagues teaching integrated lessons. John Lyman was an integrated day school that functioned in partnership with the Connecticut Alliance for Arts Education and Artsgenesis Connecticut. The school was committed to the HOT philosophy and the cultivation of student-centered learning, as was expressed in the school's mission statement, "to provide a holistic and integrated view of learning which actively involves each child in the pursuit of academic excellence through decision making and problem solving" (HOT Schools, 2015).

All participants at the Orientation Day convened in the all-purpose room for opening remarks delivered by HOT Schools Director, Bonnie Koba, who outlined the HOT Schools philosophy and goals, as well as introduced the HOT Schools staff and the John Lyman faculty who were present. Afterward, participants observed two classes of their choice from a list that indicated which of the core components each class was focused: Strong Arts, Arts Integration and Democratic Practice. In order to optimize teachers' observation time in the classrooms, guidance was provided in the form of an outline to assist teachers in recognizing and understanding key facets of the program in action.

Focused Observations: What to Look For in a HOT Schools Program.

Workshop participants were given a folder filled with information about the HOT Schools program. It included a 14-page pamphlet from the principal with details about the HOT program and key features of the school's Integrated Day Program, and the lyrics to a song about John Lyman written by students (included later in this chapter). An outline titled "What to Notice When You Visit John Lyman School" was also included (See Figure 1).



What to Notice When You Visit John Lyman School

- **Class Constitutions**
- **Active learning**
- **Daily notice/schedule of the day in each class.**
- **Physical set-up of classrooms**
- **Many things going on at once**
- **"Plan Your Work," choice board**
- **Inclusion of arts in the classroom**
- **Visual and performing materials for children to select and use.**
- **Extensive classroom libraries**
- **Overlap of curriculum areas (math, reading, writing)**
- **Project work**
- **Self-directed learning (children motivated to work independently)**
- **Questions being asked by students and adults.**
- **Children at work (alone, partners, small groups, large groups, with the teacher, etc.)**
- **Students making responsible choices (seating, individual needs...)**
- **What children are doing when they are not working directly with the teacher.**
- **Parent Volunteers**
- **Displays of children's work**
- **Please feel free to ask children to share their work and explain what they are doing.**

Figure 1. Activities to notice when you visit John Lyman School

The folder included another outline that indicated what to look for in a HOT School, including a description of the school's philosophical and theoretical framework, and the core components of the HOT Schools program listed as criteria to help observers identify the essential elements of the HOT program (see Figure 2). This information was printed on a large card for visitors to carry along as a reference throughout the day in order to provide an overview of a fully implemented HOT School.





<p>CONNECTICUT COMMISSION ON THE ARTS</p>  <p>H O T SCHOOLS</p> <p>CELEBRATING THE VOICE OF THE CHILD in partnership with the Connecticut Alliance for Arts Education and Artgenesis Connecticut</p>	<p> Evidence of Learning in, about and through the arts ~ DEMOCRATIC PRACTICE ~</p> <ul style="list-style-type: none"> ▪ Children actively engaged in the process of exploration and inquiry ▪ A child centered mission ▪ Child centered environment reflecting input and choices of children (i.e. exhibits designed and hung by children reflecting their perspective) ▪ A strong and active parent presence ▪ Successful, on-going partnerships with community cultural resources ▪ Evidence of student involvement in decision making (class and school constitutions) ▪ Evidence of a common language
<p>What to look for in a Higher Order Thinking (HOT) School</p> <p><i>A HOT School is always in the process of "becoming"</i></p> <p>---</p> <p><i>Hot Schools strive to create a seamless flow of learning in, about and through the arts through Strong Arts, Arts Integration, and Democratic Practice</i></p>	<p> Evidence of Learning in, about and through the arts ~ ARTS INTEGRATION ~</p> <ul style="list-style-type: none"> ▪ Curricular map or chart is posted ▪ Learning centers ▪ Flexible scheduling ▪ Extensive classroom libraries ▪ Project stations for independent work ▪ All disciplines are valued equally within the curriculum and are taught with integrity, creativity and interdependence ▪ General education objectives are reinforced in the arts rooms ▪ Strong arts objectives are reinforced in the classroom ▪ Arts processes and products are celebrated as the final results of student learning ▪ Concerts may be "informances" rather than "performances" ▪ Visiting artists plan long-term collaborations to teach literacy in their arts discipline ▪ Arts teachers and classroom teachers routinely plan and collaborate with each other ▪ Flexible schedules allow arts teachers to participate in grade level planning
<p> Evidence of Learning in, about and through the arts ~ STRONG ARTS ~</p> <ul style="list-style-type: none"> ▪ An arts energized environment ▪ All disciplines are valued equally within the curriculum and are taught with integrity, creativity and interdependence ▪ Standards-based dance is taught ▪ A rigorous arts curriculum in place ▪ Students express themselves through dance, music, visual arts and theater ▪ Appropriate music, movement, and exhibition spaces ▪ Dedicated arts classrooms ▪ Strong arts objectives are reinforced in the classroom ▪ Arts processes and products are celebrated as the final results of student learning ▪ Concerts may be "informances" rather than "performances" ▪ Standards-based theater is taught 	

Figure 2. HOT Schools criteria card for implementation of core components

The first statement, “A HOT School is always in the process of becoming,” sets the tone for the program’s philosophical foundation. This can be interpreted on two levels: first, that the program is continually evolving as teachers and students experience teaching and learning through the arts; and second, that the process of art making is more important than the final product. Both of these meanings were expressed and demonstrated by leaders and participants in the HOT program through interviews, conversations, and classroom activities I witnessed at the Summer Institute and at John Lyman School. Two related assumptions of the HOT School philosophy are that the arts open gateways for learning and growing on many levels and these are different for each child, and that the intrinsic self-discovery in an artistic experience enhances learning in ways that cannot necessarily be measured but often become evident in subsequent academic and non-academic endeavors. These relate to how the students at a HOT school are also in the “process of becoming.”

The next statement on the guide describes both the learning climate and the overall goals of the program with the statement: “HOT Schools strive to create a seamless flow of learning in, about and through the arts,” and this is accomplished with all three of the program’s core components: Strong Arts, Arts integration, and Democratic Practice. The following is a brief description of each component.

The first of the three core components of the HOT program is Strong Arts. This means that the arts programs at HOT schools have rigorous curricula linked to state and national standards. It also implies that the arts are recognized as integral to learning, in that they foster the development of higher order thinking skills such as critical thinking,

independent judgment, and creative problem-solving. They also provide interesting ways to communicate ideas and learning.

The second component, Arts Integration, involves integrating the arts across the academic disciplines, providing another lens with which to view all subjects. The arts are utilized as entry points in presenting lessons, to engage students through their own interests and abilities, in keeping with Gardner's Theory of Multiple Intelligences (1983). A HOT program brochure explains how, ultimately, "Arts Integration reinforces learning in all disciplines by empowering students to make connections and synthesize relationships among ideas" (Senich et al., 2015, p. 12).

The third component, Democratic Practice, provides avenues for students to develop leadership skills and supports student choice in learning and in how the schools are run. The unique voice of each child as a valuable member of the school community is encouraged and celebrated. The ideals of Democratic Practice are realized through organizations such as the student senate, and the literary and art boards as described in detail below under the heading Observation: Democratic Practice. It is a key factor in fostering leadership skills as well as student ownership of learning, as students make choices about what and how they learn, through project-based learning and various classroom activities.

Following the description of the three core components on the guide is a detailed description of how each of these components are implemented with regard to standards, objectives, classroom spaces, activities, learning centers, scheduling, etc. This

information was useful to educators new to the program and provided essential points for teachers to look for when observing classes and activities in an established HOT School.

Becoming a HOT School

I found that several of the key aspects of the HOT approach listed above are essential to a basic understanding of the program. First, I learned from the interviews that there was an emphasis on process and on “becoming” in the functioning of HOT schools. For example, there is a range among individual HOT schools regarding the level of involvement and commitment, which is determined by each individual school’s mission, financial resources, and level of administrative support. The program’s directors also recognized that not all HOT schools were at the same point in reaching the full objectives of the program. In order to help clarify the steps in the journey toward becoming a HOT school, the program’s staff published a Continuum of Participation to help schools identify where they are along the path to reaching the goal. Amy Goldbas and the HOT Schools staff were dedicated to meeting the schools’ needs wherever they were along the Continuum. See Figure 3 for an example and Appendix N for the complete HOT Schools Continuum.

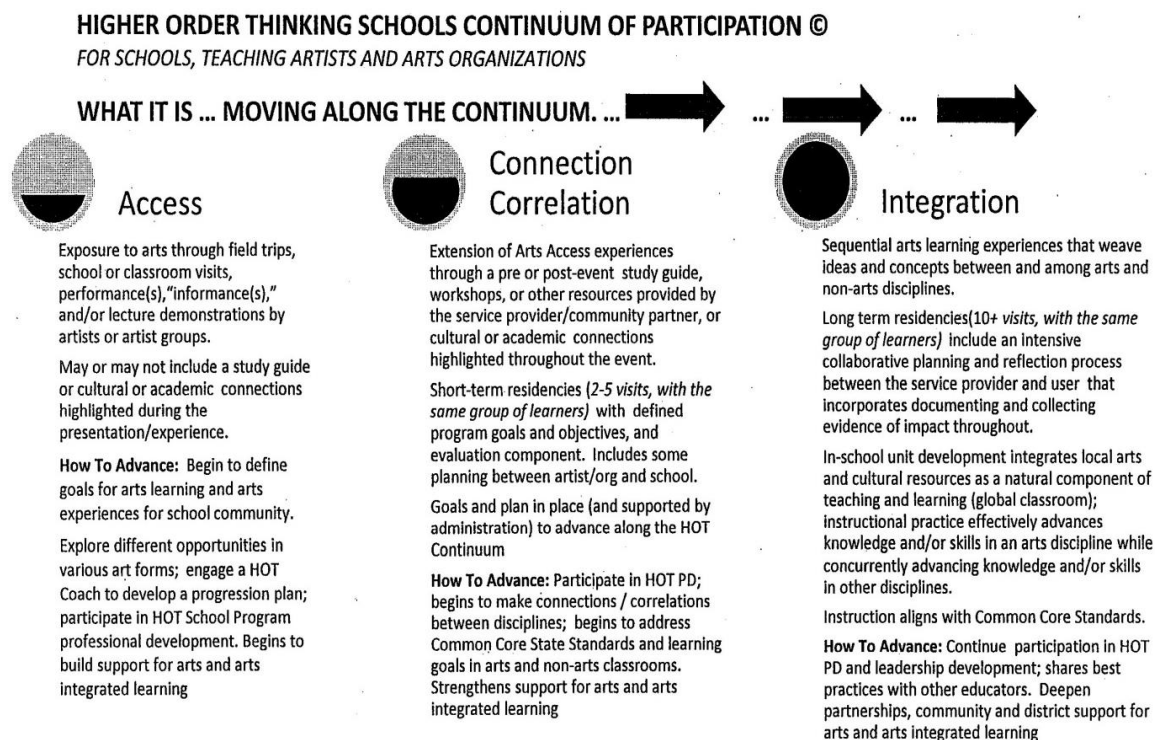


Figure 3. HOT Schools Continuum of Participation for program evaluation

In view of the ongoing evolution of the HOT Schools program among schools, I asked Amy to describe the key elements needed in order to consider a school an established HOT school, and she explained:

I'll tell you what we look for, but first I'll tell you that a HOT School is a process of becoming. So when a school is interested in joining the program first and foremost there doesn't have to be any of our work in place or these concepts in place. There has to be a willingness and a bent toward working together as a school toward this common goal; that's first and foremost. And it's a process that changes continually.

Despite the fluctuations inherent in the process of becoming a HOT school, the program offered structures to help schools meet specific guidelines of the program. This

leads to the next important aspects I observed, which were a deep respect for the arts and a belief that the highest level of learning came through AI. As a result of this high value placed upon AI, there are specific requirements prospective schools must meet to assure they are working toward a fully integrated arts curriculum. The HOT Schools program administrator evaluates the level of administrative support and assures that there are arts teachers in the building that have permanent and designated spaces for their teaching. As Amy explained:

The next step is to really explore: What do you already have in place? Do you have arts teachers in your building? Would you have the wherewithal down the road to expand that? Are you at the state recommended guidelines for arts teacher time with your students? What does that look like, what are the facilities, is art on a cart, are there dedicated spaces, etc.? We look at all those kinds of things and then we go and do a site visit to figure out what the culture of the school is, and interview people, interview parents, teachers, administrators and look to the district also for guidance to see, are they going to support this? Will teachers be released for professional development? Because really what HOT Schools is, is a professional development opportunity that becomes a network of schools, a supportive network of schools.

Amy's last statement emphasizes another key aspect of the HOT Schools approach that is not typical of traditional schools: The HOT program stands out as one that builds an impressive network of educators who are committed to learning through the arts. The network includes educators of various capacities beyond those of a

classroom teacher, including teaching artists, community arts organizations, colleges such as Wesleyan University which works in partnership with the HOT program, school administrators and parents. The ongoing nature of HOT PD is supported by this network, and it appears that they aim to provide resources for anyone who needs clarification or support for any aspect of the program. I believe this is one of the reasons for the success of the program and the level of teacher efficacy and satisfaction I observed at each PD event.

Observing the Three HOT Criteria

The three core components constitute a criteria by which a fully implemented HOT Schools program can be recognized by the teachers who were observers. These components are incorporated into the program so that each provides support in a specific area in the creation and delivery of AI instruction. The example of the kindergarten class below illustrates how Strong Arts and Arts Integration are related and combine to enhance instruction. Democratic Practice augments instruction by promoting a school culture where students are given opportunities to make choices about their learning and have their voices heard. Through Democratic Practice, students develop confidence to participate fully and celebrate the unique contributions of each member of the school community.

Arts integration. Here I will discuss my observation of one of the core components of the HOT Schools program, Arts Integration, as described in Chapter One. Teachers at the John Lyman School displayed evidence of strong self-efficacy beliefs in their teaching and students followed their directives smoothly without interruption during

my classroom observations. Teachers appeared confident that students would understand their directions, which proved to be the case since students followed instructions the first time they were given, and demonstrated an understanding of the lesson's objectives as well as the structures of the activities. In this environment, the pace of the lesson was maintained and teachers were able to act more as facilitators than lecturers, as students moved easily from one activity to the next.

These observations offered glimpses of classroom teachers and arts specialists employing AI strategies and their students' responses. For example, I observed a fourth grade science lesson titled "Dancing Through Science," a segment of a three- to four-week unit in which students were studying the life cycles of the Monarch Butterfly. I observed the second day of a class project where students had brainstormed ideas to represent the phases of the butterfly's lifecycle with a movement or dance for each phase. Students had formed small groups to study each phase and devised a movement to illustrate it. They were given colorful scarves as props to enhance their dances, and music that sounded like Mozart played softly in the background.

After working quietly in their groups, the class re-assembled for the presentation of what they called their "Monarch Migration Dance." Students in each group performed their dance with confident, fluid motions in the appropriate sequence of the lifecycle. The music added another dimension to the experience by inspiring and enhancing creative movement and providing an atmosphere that seemed to encourage students' imaginations to flow freely.

I also observed a kindergarten class where literacy was taught through the arts.

The visiting educators and I spent a few minutes in each of three classrooms to observe different aspects of the same lesson. The lesson integrated reading, writing, viewing and listening skills with music, art, dance and theater. Students read stories, created movements to express meanings, created music to represent specific emotions, used tableau to “tell” a text, and made thoughtful observations on the relationships between visual art and music in depicting feelings. The primary objective of the lesson was for kindergarteners to develop vocabulary skills through the arts, and it was clear that the teacher was confident that her students had been sufficiently prepared to engage successfully in a variety of arts-integrated learning activities in order to meet the learning objectives.

The first segment of the lesson I observed was focused on feeling words and began with the song “Five Little Pumpkins” who, as the lyrics portrayed, were sitting on a gate. Each pumpkin engaged in different actions and expressed different emotions as the song progressed. The teacher asked students how the pumpkins were feeling, and each child chose a pumpkin and an emotion to illustrate in a picture. Each child created a picture of a pumpkin expressing an emotion using shapes cut out of construction paper and pasted onto a piece of paper. When the pictures were completed, students chose instruments to portray emotions based on the lyrics, or story of the song. For example, one line of the song stated “Oh my, it’s getting late!” and it was decided that this pumpkin was feeling nervous. The children who had this pumpkin chose maracas, shekeres, or rattles to express nervousness.

When all the instruments had been chosen, the song was performed by reciting the

words while playing the instruments at the appropriate times and also making facial expressions to dramatize the story. I noticed that children performed in groups for each emotion rather than alone, partly because there were many more children than emotions, but I deduced that the song was carefully chosen and the activity designed with group performances in mind so that children would feel supported by their classmates in performance. It also helped to make the performance more interesting, with a variety of facial expressions and instruments for each emotion. Here it was clear that the teacher had received professional development in the performance techniques and timbres of musical instruments and was able to confidently integrate music in her classroom.

The second segment was focused on a story about a child who planted pumpkin seeds, and how the seeds grew into sprouts and then into a plant on which new pumpkins grew, producing seeds and completing the cycle. The students created motions to dramatize the story as the teacher read from the storybook. Their teacher coached them as they began to move as sprouting seeds, pointing out that they did not need to use their whole bodies for the sprouts, but rather could use just their hands and fingers. As the sprouts grew into plants, the teacher asked ‘How big?’ encouraging students to use larger motions and involve the whole body. When this initial whole-class activity ended, students took turns reading the story aloud while volunteers gave solo performances acting out one part of the story, whether seed, sprout or plant. This story shows that the teacher was comfortable integrating movement effectively in her classroom.

The third classroom activity involved showing rather than telling a text. Using theater techniques, students created tableaux to freeze a moment in time. For example,

the teacher said the word “thrill” and asked students “What does it look like? When a tableau was created, the teacher invited students to “Describe what you see in the tableau.” Students then developed vocabulary by trying to put the tableau into words. In this example, the teacher displayed confidence that students had been prepared to use theater techniques and to observe and describe what they saw in the physical portrayals of text.

Indirect observation: Strong Arts. Although I did not observe a lesson specifically devoted to Strong Arts, it became evident that the kindergarten students I observed had received preparation through Strong Arts in order to be able to effectively participate and understand the lessons described above. The students demonstrated their skills in the arts as they participated fully in each activity, offering an example of how the core components work together to support arts integrated learning. Students were comfortable using creative movement, they responded thoughtfully to visual art, they exhibited strong listening skills in music and knowledge of instrumental timbres. Through each phase of the lesson they worked toward developing a vocabulary to describe what they heard and saw, and were able to verbalize all their interpretations. I observed that the kindergarten students were engaged in higher order thinking at levels that were developmentally appropriate and yet sophisticated in terms of arts content knowledge and use of art materials.

Observation: Democratic Practice. Another highly visible element from the list of HOT criteria we were to look for in our observations of the lessons was Democratic Practice. Student choice and leadership skills through Democratic Practice appeared to

be a pervasive building block of the HOT School approach. The HOT program literature cited John Dewey's belief that "democracy and education must be an integral part of a child's early school life, and schools should be an extension of civil society" (Senich, Truxes, & Koba, 2015, p. 16). The positive atmosphere of the John Lyman School and the self-assured demeanor of students suggested that these students were accustomed to having their voices heard and were experienced in making choices that influenced how their school functioned. Interview data also revealed the impact of student choice in combination with AI that worked to create a strong learning environment. The HOT program evaluator, Louise Stevens, viewed the combination of these two elements as the key to a successful program. She stated that what made the HOT program interesting was "that it is not just arts integration, it is not just arts, it is the student democracy piece; the student choice is a piece that I believe is very integral to it's success."

An elementary special education teacher also emphasized that the democratic ideals were a key to his students' success. He further stated that it was one of the major factors that set the HOT school apart from others in which he had taught. He commented, "the biggest difference I've noticed about this school is that every child has a choice, and every child has a voice."

I also observed the benefits of Democratic Practice through student leadership skills as were demonstrated in a student-led tour of the John Lyman School. In this tour a fourth grader was able to articulate various examples of the HOT program in action, proudly showing us examples of creative student work displayed in the hallways. Evidence for the implementation of Strong Arts, Arts Integration and Democratic

Practice was made clear by the student's explanation of the Magical Mailbox, a box with a lion's head as the lid. Nicknamed the "Literary Lion," this repository for student writing was situated at the entrance to the library. Our guide demonstrated how students submit creative writing by slipping it inside the Lion, much like mailing a letter. She then explained how the writings were evaluated by a Student Literary Board, and those compositions considered worthy of display were chosen and given to a group of illustrators on the Student Art Board who illustrated each selection and then displayed them on a bulletin board in the front hallway of the school.

The Student Boards mentioned here are peer-review boards and are an important facet of HOTS Schools as they provide students with opportunities for leadership and to have their voices heard. Members of the Literary Board developed the criteria for reviewing the submissions to the Magical Mailbox mentioned above. The board also reviewed and submitted creative writing to the school's theater or dance groups for their interpretation and performance at a Town Meeting, the weekly gathering of the entire HOTS School community that typically takes place in the all-purpose room of the school, where student performances also take place on the stage. According to HOTS Schools leadership, "the cycle of generation, submission, review, and presentation of student writing becomes a hub of excitement and enthusiasm for learning in a HOTS School" (Senich et al., 2015, p. 16). The Art Board functioned in the same way as the Literary Board, by developing criteria for review and submission to the Magical Mailbox and for display in the school hallways.

Both of these student boards encouraged and promoted creativity in both writing

and the arts, and allowed students to determine criteria for quality and worthiness for public display. In this way, students' voices were heard and they were entrusted by their peers to make decisions that benefited the entire school community. Through Democratic Practice, students were given the responsibility to make thoughtful decisions that served their community.

This artful student decision-making was evident in the collaborative student work on display in every hallway, and was the first evidence of integrated instruction that I saw upon entering the school. The displays of writing were impressive in the quality of both the creative writing and the related illustrations. These, I learned, were some of the submissions to the Magical Mailbox which originally had only functioned as a repository of creative writing but later was expanded to showcase examples of visual art, song writing and music composition.

I thus observed an extensive amount of student creativity in writing and visual art on display and also observed an exemplar of student musical composition integrated with writing in a live performance for the visitors at John Lyman School. This example of musical creativity was an integrated composition project and student performance of the "Hello Chorus," a welcome song written by the students of John Lyman School. This song was performed for the orientation day visitors by a group of students representing the first through fourth grades, and was accompanied by the Language Arts teacher on guitar. I learned that some of the non-arts classroom teachers were sufficiently educated in the arts to facilitate song-writing and in this case, to accompany on an instrument. The lyrics of this song capture the enthusiasm and demonstrate student understanding of the

meaning of the three tenets of the HOT Schools program, with particular emphasis on Democratic Practice. This proudly performed song evokes the significance of student voice and student choice in learning and in governing the school, and illustrates the value of student-centered learning through the arts. I have included the lyrics here to demonstrate the effects of the HOT program as expressed in the students' own words:

The Hello Chorus

Lyman is a HOT School
 Learning through the arts each day
 Always follow the core values
 Every student has a say

We have boards like art and tech
 Choosing what we read and write
 Making choices every day
 Sharing ideas make us bright

Lyman is a HOT School
 Learning through the arts each day
 Always follow the core values
 Every student has a say

Every student has a friend
 Modeling kindness and respect
 Students help each other learn
 Every voice has an effect

Lyman is a HOT School
 Learning through the arts each day
 Always follow the core values
 Every student has a say

Sharing at assemblies
 Resident artists help create
 In our learning community
 Senators make our school so great

Lyman is a HOT School
Learning through the arts each day
Always follow the core values
Every student has a say

Summary of Orientation Day

The day at John Lyman School thus provided an opportunity to see a fully implemented HOT School in action, and to observe teachers and students engaging in the learning process through arts-integrated instruction, and how instruction was enhanced through Strong Arts and Democratic Practice. I expected that the Strong Arts component would ensure quality AI, but I did not anticipate the impact of Democratic Practice on instruction. During the course of my visit, it became obvious that Democratic Practice, with its emphasis on student choice, was an important key to the success of the program. Students were empowered to make decisions and they knew that their voices were heard. This appeared to contribute to the positive atmosphere of self-confidence and self-directed learning realized through democratic ideals.

Student-centered, arts-integrated learning was evidenced in the displays of collaborative student work that was evaluated, illustrated and displayed by students. The various activities of the school were described in detail by our student guide who exuded confidence and proudly demonstrated her understanding of the HOT School process of learning through the arts. This third phase of data collection was an effective means of pulling all the HOT components together in one context and witnessing examples of the program's PD strategies in action, student responses, and evidence of arts-integrated learning in the charged atmosphere of a fully functioning HOT School.

Data Analysis

As I conducted the research through all three phases, I looked for major themes and issues to emerge in the data as I continually compared and contrasted the perspectives of the HOT School PD participants in their various capacities of teacher, teaching artist, classroom teacher, administrator or workshop presenter. As the interviews progressed, I looked for emergent patterns through frequency of occurrence, in keeping with Robert Stake's observation that in case study "Sometimes, we will find significant meaning in a single instance, but usually the important meanings will come from reappearance over and over" (1995, p. 78). I noticed certain themes standing out early in the interview process, and knew I needed to devise a means of organizing and evaluating the data. I made audio recordings of each interview while also writing field notes on the emphatic expressions of successes and challenges in HOT PD and the implementation of the HOT program in each participant's own capacity within the program. As the interviews progressed, I continued the audio recordings and also created a list in my field notes of the major topics mentioned by multiple participants. As I studied these, I began to separate them into two basic categories of positive and negative experience in the HOT program, and labeled the positives as themes and the negatives as issues or challenges to be met.

As I reflected on the various roles each participant played in the HOT program, I realized that I needed to take those roles into consideration when analyzing the data. I felt it was important to include demographic information to ascertain which issues or challenges were the most relevant to each group, as I was curious to know for example, if

certain themes or challenges were more important to classroom teachers than to arts specialists. I therefore developed and managed a coding matrix using the Microsoft Excel program (see Appendix K) that would reflect the importance placed by participants of the 12 themes and six issues that emerged from the questionnaires, interviews and observations. I ranked the themes according to the number of times each one surfaced in the interviews. In other words, the ranking was relative to the level of importance in the teacher narratives based on the frequency and extent of discussion. I devised the system of ranking in the matrix in an effort to determine which themes were most significant in teacher experience in HOT AI PD, because I thought this information might offer insights on what constitutes effective AI PD according to the views of program participants. I begin the discussion with the three most prevalent, or most emphasized themes that emerged in the study, and then continue with themes that were mentioned by fewer participants, ending with the theme least mentioned. For the list of themes and issues, please refer to Appendix K.

In keeping with intrinsic case study design, in which we try to “understand the behavior, issues, and contexts with regard to our particular case” (Stake, 1995, p. 78). I decided to include all the issues in the matrix in order to give voice to and understand the struggles of teachers in the process of AI PD and in developing and sustaining a HOT School integrated curriculum. After all the findings had been documented, I realized that the 12 themes represented four thematic categories. From this point forward I considered that there were four themes and that the 12 themes I had originally identified were really sub-themes that fell under these four themes. Similarly, the six issues I had originally

identified made sense as two issues with seven sub-issues. I went from six to seven sub-themes because there were really two facets related to Strong Arts, one being support for implementation and the other sustainability. A continuation of the analysis process can be found at the beginning of the next chapter, which will be followed by a detailed description of the themes and issues.

Chapter Six: Emergent Themes and Issues

In this chapter, I introduce the themes and issues that emerged from the data that were collected through participant interviews and observations of the HOT AI PD events, sessions, and workshops. As I explained in the previous chapter I originally identified twelve themes, however, further analysis made it clear that there were four themes (each with four sub-themes, as described below): teacher benefits, student benefits, HOT PD strategies and community. This can be accounted for as a few sub-themes were applicable to more than one theme, thus making sixteen sub-themes. Similarly, the six issues that emerged from the data were later identified as two issues: support structures and sustainability. Under the issue of Support Structures there were four sub-issues and under the issue of Sustainability there were three sub-issues. In the final analysis, I determined that the four themes and corresponding sub-themes worked together to support an overarching theme or a meta-theme: teacher satisfaction through transformation of the learning environment as a result of participation in HOT AI PD.

Emergent Themes: The Perceptions of Four Types of Stakeholders

In this section, the following four themes are presented: *teacher benefits*, *student benefits*, *HOT PD strategies*, and effects upon the larger educational *community*. Each theme will be introduced and then further elaborated upon with the support of four sub-themes each.

Teacher benefits. I named the first theme teacher benefits, and this refers to those teachers who had engaged in HOT PD and who were working to create and deliver AI curricula. These teachers expressed enthusiasm for how they had benefited from the

relevance of the PD, and how helpful it was to have ongoing sessions throughout the year as well as in the summers. Teachers benefited from the hands-on strategies that helped them plan effectively for their students, and also expressed how it was meaningful for them to learn from other teachers. The narratives repeatedly showed how teachers had benefited from the transformation of the learning environment. They were able to reach more learners, and therefore felt more fulfilled and happier in their jobs than before they joined the HOT program. The following sub-themes are listed in order of prevalence as they surfaced in the narratives.

Relevance and enthusiasm. HOT PD is relevant, inspirational, ongoing, and fulfills or exceeds expectations. This was by far the most enthusiastically expressed facet of teacher experience in the HOT program, and it offers a stark contrast to the attitudes that many public school teachers hold concerning typical PD opportunities. As discussed in Chapter One, typical public school professional development sessions are not always relevant to teachers' needs and interests, but rather are often focused on district initiatives and are departmentalized by grade level or subject. There is usually little or no time for collaborative planning across the disciplines between classroom teachers and specialists. Furthermore, as the participants in this study described previous PD experiences, they stated that it typically offered little or no relevance for arts specialist teachers, and that they had no choice in how their PD time was spent. As a math teacher and Summer Institute workshop presenter put it:

As a music teacher you probably had to sit through standardized test meetings that you have no business being a part of. ... It's a very frustrating and awkward thing

if you have to sit for three hours at a meeting that has nothing to do with you.

And I think it's an inappropriate use of resources; the taxpayers are footing the bill for this and in you're sitting in a workshop that has nothing to do with your professional bearing. Choice is really important.

Other issues of relevance were raised specific to arts integration professional development. According to those interviewed, there was a there was a concern that non-arts teachers had specific needs for PD in regard to preparation in the arts, and that PD was needed in order for AI programs to be aligned with academic standards to meet curricular demands. Others mentioned that PD time was important for arts specialists to work together with non-arts teachers in order to better understand subject-specific requirements in both subject areas. A middle school teacher, author, and project-based learning coach who served as a sequential track presenter at the Summer Institute, pointed out that effective PD must meet individual teachers' needs and provide clarification on subject-specific goals using AI instruction. She suggested that teachers need differentiated instruction due to their varying knowledge of arts subjects and because "they have different passions that need to be leveraged and tapped into." Teachers who do not feel they are artistic may need opportunities "to feel the success of bringing that out, in order to really feel why it's legitimate to use those strategies for their students." She also pointed out:

We have to help make the connections for those teachers because they don't make – not don't want to make – but some of them struggle with making the mental leap. So we have to do the job of connecting the dots for them, and that means

prep and that means frontloading and that means acknowledging that their fears are legitimate.

She stressed the importance of AI PD related to reaching subject-specific goals and standards through the arts, not just “I’m going to teach music because we know it does something to the brain that helps math.” Several teachers acknowledged that these needs were addressed through HOT PD structures such as HOT Blocks and other meeting times that were designed to ensure that all teachers could communicate on curriculum goals and standards when creating integrated curricula.

As was evidenced by the enthusiastic atmosphere at the Summer Institute, where teachers showed eagerness to build on their successes by learning new strategies, the data showed that teachers felt their needs were being met in workshops and seminars relevant to their teaching. For example, social studies and math teachers chose to attend sessions focused on strategies for teaching those specific subjects through the arts. Moreover, they frequently expressed how inspired and rejuvenated they were by sharing their experiences with a community of educators with common goals. A middle school math and science teacher described his first experience at the Summer Institute as “a weeklong explosion of thought and teaching, and art and interesting ideas and interesting people, and at first I was a little blown away but once I got the hang of what was going on; it was really an invigorating experience.”

The HOT PD offerings at the Summer Institute were not only considered relevant, but many participants described them as inspiring and transforming. For example, one elementary special education teacher said this about his experience:

The word I would use is transforming, because every year I come here and I feel transformed again, like it makes me a better teacher - it brings me new stuff to do, it gives me new activities to learn and try and so the word I would use to describe it - is transforming.

The Summer Institute provided an opportunity for teachers to spend meaningful time with colleagues throughout the week. The excitement and high energy level I observed was palpable, as teachers visibly enjoyed the company of their peers who shared the same ideals and were committed to their work. Throughout the week, teachers could be seen gathered in hallways, sharing stories, greeting one another with familiarity or supportive gestures. Laughter was often heard through the walls of meeting rooms, as teachers enjoyed the presenters as well as their new roles as students. As one elementary classroom teacher put it: "From this experience I am very energized. I am very happy to be around people who are so passionate about their teaching." I also observed teachers at the Summer Institute eager to talk about their experience, as I engaged in elevator chat that led to several interviews. I considered this willingness or desire to share and make HOT Schools better known in the greater educational community to be indicative of a high level of satisfaction and conviction of the strengths of the program.

As evidenced in teachers' experiences, the Summer Institute provided a unique, energized learning environment. Teachers were eager to learn new strategies and share their successes with peers. I also observed how they welcomed and encouraged teachers new to the HOT program, and supported them as well as the experienced HOT teachers in taking risks artistically and personally while assuming the roles of students in the

workshops. Teachers not only engaged in meaningful learning for their own needs, but they also participated in the workshops from the perspective of the student. This HOT workshop strategy offered the beneficial byproduct of shared challenges and what I frequently heard referred to as “ah-ha” moments, all of which contributed to an emotional bonding between the teachers. I observed this bonding all around me, often referred to as a feeling of “family” among HOT Schools teachers.

A special education teacher described the closeness between himself and the other teachers that developed during the Summer Institute, and when he returned the following summer, even though a year had passed, he said,

I came back and I felt like I saw them yesterday and it was like we haven't missed a beat because you're like a family. Like they say, from the very first day you are here you feel you really are a family with these people. And that's what this workshop has given me

As the evidence above shows, the HOT Summer Institute was focused not only on providing teachers with relevant, thought-provoking materials and strategies they were eager to take back to their schools, but also gave teachers the inspiration toward a creative learning environment for their students.

HOT PD is hands-on and student-centered. *In this section I will focus on teacher benefits related to hands-on, student-centered PD, and the positive experiences reported by participants in workshops at the Summer Institute. Teachers appeared to enjoy the hands-on, student-centered PD that placed them in the role of the student. I observed much enthusiasm and camaraderie among the teachers who participated in this*

type of PD in the workshops at the Summer Institute. This style of PD gave teachers a new perspective on how their students might feel when asked to perform a task in an arts-integrated classroom. As teachers, we can sometimes forget what it feels like to be a student and to be faced with challenging assignments, where sometimes we are expected to go out on a limb in front of the class. A HOT school parent and high school teacher described how her first experience with hands-on PD at the Summer Institute was a reminder of how her students feel every day. She described how she found herself outside her comfort zone in an improvisation workshop, but in the end she realized how taking that risk helped her understand her students:

...and I'm sorry, this is so far outside the box for me; I'm so far outside my comfort zone. And you know, about halfway through, I demonstrated and people applauded me because they knew how uncomfortable I was. But I took the risk to go out there and I did it. And I think the best part of this is for me as a parent and a teacher is understanding that my own children and the students I teach feel like this a lot. They feel like this all the time and so it brings me back to have the empathy - not that I am not empathetic with them, but it definitely was a good reminder for me.

HOT PD is hands-on, with teachers assuming the roles of students and student-centered, with the student experience in mind. A retired HOT music teacher who is now a teaching artist for the program described the most effective form of professional development that HOT offers as “masterful modeling, great models of classroom teachers, and really hands-on classroom experience, leaving the [teaching] tools.”

Well, I think if they engage in the actual activity the kids are doing, that engages them. I very often just have my teachers during professional development do the same things the kids do. They say “oh, this is so much fun - I can do this,” or “look at how I can learn this here, and that” and all of a sudden they’re engaged. Telling them is not going to work as well as having them do it and feel it themselves....I think also there’s no reason why administrators shouldn’t be getting their hands dirty and doing the projects. I don’t think they should sit and listen just like teachers shouldn’t sit and listen. You should have them painting murals and performing and actually doing stuff, and that’s how they’re going to get engaged.

The above discussion illustrates how teachers in the HOT program learn to be aware of the risks taken by students. The teachers are also encouraged to take risks in their own PD so that they might increase their artistic skills and abilities. Many have found that the presence of a teaching artist helps them reach further into areas utilizing the arts than they would have attempted on their own, especially those with limited skills in the arts. Several teachers remarked that they felt they had no artistic talent or skills, but after working closely with a professional teaching artist, were able to improve their skills and had gained enough confidence to utilize the arts in their teaching.

The hands-on nature of all of the sessions I observed at the Summer Institute was eye-opening in how it provided opportunities for teachers to experience arts-integrated learning from the student perspective. Intentionally involving the teachers in hands-on and student-centered practices was used to increase teachers’ understandings of their

students and to help them to develop student-centered learning opportunities in the classroom.

Teachers teaching teachers. The HOT leadership recognizes that teachers enjoy learning from their peers. Much of HOT PD therefore involves teachers teaching teachers. One of the hallmarks of the HOT Schools program is the professional development that continues throughout the year, with an outgrowth network from experiences at the Summer Institute, Peer Partner Days, Leadershops, and other workshops throughout the school year that help teachers become experts in integrating the arts. Teachers enjoy sharing best practices and are considered a valuable asset in HOT PD, because as Bonnie Koba put it, the teachers: "...really have become the experts in terms of arts integration because they do have so much professional development and they do have so much practice. And I also know that teachers like to learn from other teachers..."

Koba also described how the Leadershops developed from efforts to empower HOT Schools teachers to teach one another, sharing tools and strategies they have gained through PD at the Summer Institute and developed or customized them for their classrooms. Seeing this happen, Koba would ask a teacher to lead a workshop in a particular session; this is how the Leadershops developed. She stated, "We really want teachers to be able to see and first of all feel empowered when they go out and take a risk and they have successes, we want to celebrate those successes, and we want to empower those teachers as teacher leaders..."

Teachers as leaders will continue to be a driving force in the program as the HOT

Schools administration looks toward the future. When asked about the possible expansion of HOT Schools beyond Connecticut, Amy Goldbas spoke of how HOT teachers would be an important resource in future plans to replicate the program in other states. A new venture, which Amy said she “affectionately calls HOT Schools to Go,” would engage experienced HOT Schools teachers as instructors in a visiting in-service program. This program would involve a three-day visit to a prospective HOT School, where cohorts of local teaching artists and teachers would meet with HOT schools teams and work together in similar ways as the Summer Institute:

...There would be multiple presentations, and then kind of a guidebook that the district or school or arts community could take to go further. Then we would have a menu of our experts, if you will: our faculty, our teaching artists, parents, and administrators who could then be called upon as consultants or leaders in the field to come down and either consult in a distance learning way or come to the community when needed to address particular issues. And I’m very excited about it. I think it will be a great next step for us.

I observed the practice of having teachers teaching teachers as one of the most effective aspects of HOT PD. One session at the Summer Institute involved three teachers – two elementary classroom teachers and an art teacher – who led a session on HOT Blocks, where non-arts classroom teachers team teach with music, art, media, or creative movement essentialists to teach reading, writing, and math skills. The presenters explained that the aim of HOT Blocks was to inform teachers of the essential elements in presenting lessons through multiple intelligences and the arts. This PD model was

designed to promote innovative planning and provide teachers with blocks of time to work collaboratively, fostering meaningful dialogue and mutual respect between teachers across the disciplines.

One of the examples of HOT Blocks I observed at the session was a lesson on haikus and music. The haikus were part of a larger historical fiction unit that was focused on the Navajo tribe's perspectives on learning to become friends with White people. Prior to writing the haikus, students studied about Native American life on reservations and their historical relationship with white people, the conflicts and unfortunate situations. Students used this knowledge to write the words of their haikus, then worked on speaking the word rhythms and finally added percussion instruments. The instruments were played between the lines of the haikus in a style that imitated Native American music. The presenters showed a video of the culminating student performances. This example of HOT Blocks cross-curricular planning showed how music, social studies, and language arts could be integrated as part of a historical fiction unit. The presenters emphasized the importance of working with a music teacher to help with word rhythms and percussion instruments in creating and performing the haikus.

The above example of teachers teaching teachers at the Institute and through HOT Blocks reveals a trust and an understanding between them in that scenario that might not be there with an outsider presenting a workshop, especially when asking teachers to assume the roles of students. Teachers appeared to understand each other and the challenges they face in reaching students each day. I observed teachers supporting each

other in this manner in the above session as well as others throughout the week at the Institute.

Transformation of learning environment. HOT PD fosters the transformation of the learning environment with student-centered learning and student ownership of the learning process, and enhances the student-teacher relationship. When teachers began integrating the arts in their classrooms and incorporating the HOT core component of Democratic Practice in conjunction with it, they could see how learning became more student-centered, with more student ownership of the learning process and an improved student-teacher relationship. Another example of a HOT strategy that offers opportunities for students to take ownership of their learning is called ECHOS (Enhanced Curricular HOT Opportunities). As Amy Goldbas, Associate Director of Programming, explained:

ECHOS are the enhanced curricular activities where students choose a subject they are interested in and teachers choose to teach something in an arts-integrated way, and the school breaks down into these different ECHOES every Wednesday afternoon. Parents teach some of them, they bring an artist to teach, and they are like a six-week intensive if you will. It's all about student choice and it's all connected to the curriculum.

Another HOT structure that encourages students to take active roles in their learning is the morning meeting, which illustrates the HOT component of Democratic Practice. A second grade teacher described the effect of the meeting on her classroom environment where students are involved with and motivated by self-guided learning:

... every morning we do a morning meeting. The first trimester I'm there for them guiding them, the second trimester I take a step back and by the end of the year the kids are really running the meeting themselves and making decisions themselves... So it's a very liberal classroom, a very democratic place and this has really helped me understand: Let the kids decide what they want to do and it's interesting what happens, because it's not peer pressure but they will see this one over here doing that and then they want to get their work done so that they can do it. It's very motivating.

A parent of a HOT School student who is also a teacher at a non-HOT high school emphasized the importance of Democratic Practice at all grade levels and the resultant influence on learning:

I love the whole democratic practice, that kids at kindergarten have a say in what they're going to learn and how they are going to do it. I loved that students weren't always lined up in a desk and sitting there. They had freedom of choice to choose if they wanted to write down on the floor, or sit at a table or work with someone else. So when I went in I noticed that all kids were engaged and that was really important to me as a parent and as an educator myself that that can often be difficult.

This parent also recognized the significance of another HOT strategy, project-based learning, in enabling her daughter to experience success in school:

The information that she knows at her age is amazing and it's because it's project-based, it's this very big thing. It's not just math facts, it's not just "we're learning

about the environment today.” It becomes so much more. They have so much ownership over their own learning that I don’t even see at the high school level with my students.

It appears that project-based learning can make a difference with many students who learn more efficiently with hands-on projects and who enjoy working with their peers. Student capacity to cooperate and collaborate with one’s peers is developed through the HOT program’s emphasis on project-based learning combined with Democratic Practice. Teachers expressed satisfaction with the levels of student growth in their classrooms, which was the next most prevalent theme that surfaced in the interviews.

Student benefits. This theme is related to *student benefits* as a result of HOT PD strategies and the resulting transformation of the learning environment. Students in HOT Schools are offered a variety of paths to learning through the arts. Lessons are presented in different modes so that each student has a better opportunity to grasp meanings and to participate fully in classroom activities. The HOT program builds on student strengths and de-emphasizes limitations by recognizing multiple intelligences as gateways to learning.

Reaching all students. The HOT program reaches and engages students in ways that a traditional curriculum does not, addressing diverse learning styles and special needs, especially second language learners. Teachers expressed enthusiasm about the integrated curriculum because they had come to recognize the vital role of the arts in learning as a means to reach and engage students. Amy Goldbas, Associate Director for

HOT Program Development, realized early on in the process of establishing HOT Schools, that “the integration was really critical to making the arts an integral part of every child’s learning process.”

As mentioned above with regard to multiple intelligences, the arts can serve as entry points for subjects that students find uninteresting or difficult to grasp, and they can enhance understanding by providing a new perspective. A current HOT teaching artist and former math teacher found this to be especially the case with math:

... a lot of kids who are blocked or don’t understand, or don’t really find a way to get math into their head, by presenting an alternate approach or alternate entry point into math through a visual or artistic opening, it kind of opens the world of math to a different point of view. So very often it’s a way to engage kids who don’t find math interesting or exciting...”

A different teaching artist described how through curriculum mapping with a classroom teacher allowed her to plan accordingly and collaborate in the teaching process. They were able to use kinesthetic learning to help students grasp a challenging topic:

I would say “O.K., what is your curriculum this year?” - we started doing curriculum mapping - “when are you studying these things and what are the ways I can link up?” For example, the third grade was studying shapes and the teacher was saying, “I’m having a horrible time getting kids to remember the difference between triangle, squares, rectangles, all the different shapes.” And so, in music class, I was wanting them to use more movement, so we actually ended up

making a video of the kids creating shapes with their bodies, by themselves or in groups, making all the different shapes. Then we wrote a song about the shapes, and then we made a video of that. And those kids knew the shapes when they were done. They definitely knew the basic shapes, and it was a gas! It was very physical. They had to think about the shapes with their own bodies, but also then interpersonally, working with the other kids as well, they had to figure out how to make shapes with each other, and they came up with hundreds of ways to make shapes.

Teachers often described their classrooms as places where students were not confined to their desks but were out of their seats, engaged in learning through the arts. One teacher commented on the effectiveness of the kinesthetic approach in her classroom and expressed enthusiasm for “the mobility that HOT is showing me and the different ways to get the students involved and out of their seats.” Through the HOT Schools ongoing PD program, teachers learn strategies to present lessons in more than one modality in order to connect with all their students. As one teacher explained: “...some children learn through auditory, some through kinesthetics, ... so if you kind of lay it all out there; there are different ways they can learn, different ways to differentiate and meet the way they learn, which is really important.” A former HOT school music teacher, now a professional teaching artist, offered his perspective on the arts as a portal for personal connection in learning:

One of the easiest portals for personal connection and human experience that we understand is the arts. ... I contend from experience with students [that] the

amount of student engagement and depth of learning that comes with bringing in these different modalities through the arts definitely influences this performance and interest and engagement in school.

One teacher stated succinctly that through the HOT program, “You reach so many other kids, you reach the learning styles of so many kids that you would otherwise miss without the integration.” A veteran teacher described how, when she and other teachers became aware of Gardner’s Theory of Multiple Intelligences and the implications for learning, they realized:

...how important it was for students to have multiple windows, multiple entry points, different modalities through which they could access new learning and explore new learning. I just feel the more avenues you incorporate as part of the learning, the stronger it is and the more all the students have a chance to feel part of the experience and fully engaged in it.

Students with special needs. The arts can enable children with special needs to demonstrate learning and to communicate that learning in different modalities. In this respect the arts can level the academic playing field so that special needs are no longer visible or no longer a barrier. A special education teacher who had grown up with educational challenges of his own observed how the arts could free students from limitations, and that their limitations could become unnoticeable to the observer:

So, I saw as a kid and growing up, and as an adult I see with the kids who have special needs how it helps them. When we’re doing a math test or reading a story or memorizing facts for social studies it’s difficult, it’s very challenging. But

when we're getting up and dancing and acting it's very different; they're leaders. We get on stage for Friday Forum which according to HOT they call Townhall. And at this Friday Forum they're the stars of the show. They're the ones reading the poem, they're the ones telling the story, they're the ones dancing on stage and you can't tell that they need help or that they have special needs.

Second language learners. The arts provide students with alternative ways of approaching lesson content and in communicating their learning. The principal of an international school with a large percentage of second-language learners recognized the importance of multi-modal learning for her students. She stated that arts-integrated learning through the HOT Schools approach “allows them to study and learn and express their learning in multimodal ways... instead of a student struggling to learn a second language, to be able to do something with their body movement or singing or pictorial/visual...” The kinesthetic or visual arts thus provided alternative ways for students with learning issues whom the principal referred to as “nontraditional learners” to access lesson content and demonstrate learning. The principal also observed how the arts could lift a text from a book and convey meaning to students in creative ways. The arts thereby become expressions of text and can tell stories or narratives from a book visually or through movement or drama.

The principal then related how the school conducted assemblies at the end of each quarter during the school year to showcase student learning. The assemblies followed international themes in keeping with the multi-lingual school community. Students presented in different languages and demonstrated their understanding of core content

through paintings, performing music, plays, and dance. The principal related the HOT process to the goals of Common Core; that students were able to “present an idea, develop it, use an analogy.”

A workshop presenter and middle school math and science teacher at the Integrated Day Charter School in Norwich, CT, spoke from his years of experience in teaching a subject that can become challenging for some students:

With math, as you progress through the levels, math becomes increasingly abstract and when it goes that way you lose a lot of hands-on material ... I think hands-on is another way that kids learn, even if you give them little bits of paper or build stuff out of it, it activates something, it helps cement what they're learning about, or something they already know. Even if you take all the manipulatives away from math, kids will still count on their fingers. They want these manipulatives; they want things to play with and the really great thing about art is that it is always hands-on, even when you're doing poetic stuff which is all ethereal, and there are ways to bring it down, with structures to make it real, so I think math and art were meant to be together.

The idea that math and art belong together might be viewed as a profound statement, as it reveals a deep understanding of mathematical and visual/artistic intelligences and how they complement one another. The pairing of art and math to achieve mathematical understanding is not a commonly held assumption among math or art teachers in non-integrated education programs. In the above scenario, however, the math teacher is able to break through the mental barriers some students have toward that

subject and as a result, the learning environment is transformed. This leads us to the discussion of next most prominent theme, that of transformation of the learning environment.

Transformation of the learning environment. HOT PD fosters the transformation of the learning environment with student-centered learning, student ownership of the learning process and enhances the student-teacher relationship. While I covered the transformation of the learning environment in the discussion of the first theme, teacher benefits, it is important to include it here as the transformation of the learning environment is clearly a benefit to students as it is crucial to student success and happiness in the classroom. Several teachers and a parent described how students loved coming to school and enjoyed participating in arts-integrated lessons and activities. They noticed that the students were having fun while at the same time discovering new avenues of learning. For example, in the Town Hall Meetings, the weekly assemblies devoted to student presentations, teachers reported how the students enjoyed exercising leadership skills and writing their own scripts, thereby taking ownership of the learning.

A teacher presenter expressed how traditional classroom settings can become stale or stagnant, but that the HOT program provides “a way to keep things always fresh and exciting. And when you’re excited about it, the kids get excited about it. If you’re ‘eh I’m not excited about this’ just teaching from a book or computer, it’s not fun.” Several teachers made similar comments that when the students are up and moving and an active part of the learning, they have ownership in what they are learning.

A fourth grade teacher observed the positive effects of the HOT environment on

her students and the opportunities it created for new connections toward learning:

There were times when I saw certain students light up when a theater person came in and worked with us, or a storyteller worked with us, or a musician. And I would get a window into knowing that this is something this child is really invested in and I can work through those modalities with that child.

Student interest is a guiding force behind another HOT strategy, ECHOS, which are whole-school enhanced curricular activities, a six-week intensive enrichment program where students choose a subject they are interested in, teachers develop arts-integrated lessons, and outside artists or parents come in to teach. As Amy Goldbas stated, “It’s all about student choice and it’s all connected to the curriculum.” The ECHOS strategy provides enrichment benefits for all students and is a significant force in the transformation of the learning environment.

Student growth. The HOT program fosters student growth in terms of improved social skills, leadership, improved behaviors, and improved attendance. Teachers described their schools and their classrooms as places where students interact positively, enjoy leadership roles, work on projects together, have minimal or no behavior issues, and their attendance rates are strong. One teacher observed:

I really pride myself on the learning environment being a place kids want to be. They want to come to school; they don’t want to be home sick. I’ve gotten that feedback from parents that the kids are actually upset if they stay home from school; they want to come in, they don’t want to miss.

School administrators notice not only the improvement in attendance but also a

drive toward positive behaviors in the HOT School environment. Amy Goldbas noted:

...what our principals say oftentimes is that they can see the impact on how teachers are teaching students in class, student attendance and a general tenor in the building and that that's really critical to them for what their school community and school culture is like. ...in terms of referrals to the principal, in terms of community culture and behavior, etc. there is a vast difference in HOT schools.

The HOT Schools program included students of all grade levels in the same core values, development of leadership skills, growth in social relations, and ultimately intellectual growth. Leadership skills were apparent at all grade levels, including the youngest students. One teacher observed how "students in first grade have developed leadership skills and shown positive growth through participating in Student Council. They attend meetings [and] report back to the class." Another teacher remarked on how students' greater depth of understanding through the arts also led to greater maturity of social skills:

I will just reiterate that so many of my students were engaged through the arts. I really think there is a qualitative difference in the nature of their social relations with each other and the nature of the depth of understanding that many children have that the HOT Schools program has really contributed to.

A special education teacher who had previously witnessed challenging student behaviors while teaching at a non-HOT school compared the behavioral environment to that of his current, HOT school. He pointed out how the stress levels are reduced through effective HOT strategies using the arts:

...it quickly just jumps off because the teachers are able to see when [students] are stressed or when they're anxious or when they're nervous and that's when they stop and sing a song. Each teacher has different things: a class poem, a class song, a class dance. And they'll stop, turn the music on, they'll clap to the beat, they'll get them to do it.

When asked about any further thoughts on AI, a Summer Institute participant who is both a psychotherapist and college professor offered a holistic vision of education that embraced personal healing as part of the learning process: "Being here has let me think of what I'm really interested in. This morning I'm thinking I'm really interested in where education and psychotherapy meet and where learning, self growth, and healing can happen at the same time." A songwriter and teaching artist who was formerly a teacher, also emphasized the holistic effects of the HOT Schools program and how the arts can solve multiple problems:

Children don't all learn the same way and the arts is one way to meet the needs of every child, and we talk that talk, but truly this is the best way to do it. It can solve so many other problems - teaching through the arts can solve discipline problems, can solve coming to school problems, can solve motivation, productivity and all of those things.

The above observations illustrate how the arts can contribute to student growth in several non-academic areas due to the holistic nature of learning through the arts.

Although a direct causal relationship may not be known, these benefits may indirectly influence academic performance through improved habits such as attendance, behaviors,

and motivation (Catterall, 2009; Stevenson & Deasy, 2005).

Work skills. The HOT program fosters 21st-century work skills. While this sub-theme was the least prevalent in the data, it is related to the ultimate goal of education, that of creating responsible citizens who contribute to their communities and are prepared for the 21st-century workplace. This theme is aligned with studies cited in Chapter One, where the skills needed for the future workplace were discussed under the heading of The Value of the Arts in Education (Efland, 2002; Robinson, 2011).

Two participants in this study suggested that it might be helpful in developing support for AI programs if more administrators and parents could be made aware of the value of AI in relation to the impact it can have on efficiency in the 21st century workplace, which increasingly requires integrated problem-solving and divergent thinking skills. When asked about how to convince someone of the definitive value of arts integration, a Summer Institute presenter he offered this perspective:

...I think you can do it from a lot of different directions. One, you can do it from the data perspective, what the research shows and research-based stuff like charts and things like “this is a way to engage students.” Another way is to really to come up with real-world career things in the sense that today’s world is a media rich world where people in their careers are required to put together media, and visual presentations and things that are, you know, that are not dry and just topic-specific but that can be engaging in different ways. I think that’s one way to show that 21st century skills require you to not only know your skills but you have

to be creative and able to speak to people and present, to be engaging, and all of that comes from many HOT skills.

When asked to add anything else he considered to be of general importance in the HOT program, a former music teacher who had become a teaching artist pondered the far-reaching implications of AI and looked toward the future with these final thoughts on the value of arts education for 21st century work skills. The teacher commented on the movement toward the STEM model for the last six or seven years and the urgency to “catch up” to the engineers coming out of Asia. He pointed out importance of reaching beyond those technical skills toward the cultivation of creativity to prepare students for the 21st-century workplace:

... Asia is now going in another direction. They have all the skills but they are losing the creative aspect, they are losing innovation. Where do those things come from? They come from the arts. That’s what nurtures that. The other things give you tools, and they’re critical tools, but for the 21st century skills, the arts are one of the great portals to access those things.

I was somewhat surprised that teachers did not place more emphasis in their interviews on the development of 21st-century work skills in relation to AI. This could be due to a number of factors, the primary one being that most of the participants in this study are elementary teachers, who are less concerned with college entrance or workplace requirements than with intellectual development and basic academic and social skills. However, a parent participant in this study noted how the HOT environment might foster future work skills in elementary-aged students in the following statement: “Students

learn they can have a voice in what happens at our school. They love being able to have input in the decision-making process and are beginning to understand how the ‘real world’ works” (Senich et al., 2015, p. 7). Although this theme was not emphasized as much as others, there were a few teachers and a parent who looked to the future and saw AI playing a significant role beyond the school years into adulthood.

HOT PD strategies. In describing this theme, I will detail the most effective HOT PD strategies as described by teachers who had participated in the HOT program offerings at the Summer Institute and in ongoing forms of PD throughout the school year. There are four forms of PD offered throughout the school year. *Mini-Institutes* are residential weekend events where concepts from the Summer Institute are reinforced and best practices are shared. These institutes provide a forum for teams from various HOT schools to re-connect and learn from each other.

Convenings. These gatherings are a form of collegial support where HOT teachers, administrators and staff meet to brainstorm solutions to the challenges of sustaining arts-infused environments. For example, one type of convening is the principals meeting, where principals meet with HOT Schools staff to discuss aspects of the program, plan PD and exchange information concerning staff participation, student progress, and the overall impact of the HOT approach.

Peer-Partner In-Service Days. These are day-long sessions where teacher teams learn how to develop standards-based curricular units. A HOT Schools brochure described peer days as a process of choosing a particular art form to integrate with “a field of study, such as teaching writing and social studies through visual arts; writing and

math through music, or writing and science through theater” (Senich et al., 2015, p. 14).

Teacher-Artist Collaboration. This is a ten to 20-day sequential learning experience for students during which teachers work with professional teaching artists to learn arts-infused strategies with which to deliver core content. “TACs encourage students to identify, to connect, and synthesize ideas and concepts between and among disciplines” (Senich et al., 2015, p. 14). TACs are successful, collaborative, experiential learning, where teachers and visiting teaching artists learn from each other and then reflect on student outcomes.

Teachers teaching teachers. This sub-theme was also mentioned under the theme *teacher benefits* above, but here I focus upon how teachers teaching teachers is used as a strategy in HOT PD, whereas above I was more focused on how the strategy had the outcome of benefitting teachers. This strategy was clearly one of the key strategies of the HOT program and was implemented at all levels and forms of HOT PD. Teachers expressed enthusiasm in presenting material to other teachers, could relate to the experience of the presenter in developing a particular strategy, and enjoyed hearing about the process and how challenges were met. In sessions at the Summer Institute, I observed teachers nodding in agreement and commenting on their experiences with their own students. There seemed to be an unspoken understanding between teacher and presenter when the presenter was also a teacher in a public or private school setting. Many of the workshops at the Summer Institute were taught by HOT Schools teachers, who could share their journeys from the earliest experiences in the HOT program to the proven, successful strategies currently in place in their classrooms.

Teaching Artist residencies. The HOT program utilized professional teaching artists in AI PD. A Teaching Artist (TA) is a professional artist who works in partnership with schools and arts organizations to help teach academic subjects through the arts and help classroom teachers increase their artistic skills and understandings of the arts. The Teacher-Artist Collaboration or TAC was a key element of HOT AI PD, and an ongoing form of PD, as described above. This type of collaboration took place during the residency of a professional TA at a school. The use of TAs is one of the hallmarks of the HOT program, and offers classroom teachers arts-infused strategies with which to deliver core content. HOT TAs receive special training for their residencies in schools which cover a 10 to 20-day period, during which time they create sequential learning experiences in collaboration with classroom teachers, as described above.

The HOT program provides PD for the TAs so that they will understand their role in relation to the classroom teacher and will be able to provide artistic guidance within the context of the teacher's responsibility to deliver the curriculum and manage the classroom. Teacher participants in the HOT program have come to regard the role of a professional TA as an essential element of HOT AI PD. As a former music teacher and current TA explained, their role in the classroom is to help facilitate instruction and show the curricular connections rather than force an agenda, and to increase the level of expertise and comfort in bringing the arts to the classroom. I asked another professional TA who was a presenter at the Summer Institute what sort of advice she would give to teachers who had never integrated the arts before in their classroom, and to describe what she would have them do. She stressed the importance of teachers recognizing that the

arts are all around them, and they just need to be able to identify them. The arts are connected to other subjects, for example: “When people sing they can be connected to learn about the body, and the parts of the body that work to make their voice project.” She also stressed the importance of working with TAs “so that they can bring out the best of the artistic components that we can apply in the classroom.” She further commented that having a professional TA in the classroom “really inspires and motivates the teacher, it motivates the student to show that ...the artist profession [is] also a career that one can aspire to and it’s not the last thing one wants to do.”

Another teacher also described how working with a professional TA increased her comfort level in the arts and the impact it had on her ability to integrate music in her classroom. After several TA rotations in her school, she described how she eventually became more comfortable integrating music in her classroom, “...after working with two or three of the songwriting teaching artists over a period of several years...I became comfortable with music and songwriting in my classroom with students even though I have no musical background or talent or expertise whatsoever.”

A professor and presenter at the Summer Institute also indicated that the TA was one of the greatest strengths of the HOT program: “I think they’re bringing in really stellar teaching artists ...and I think this is really exciting; you’ve got a bunch of real professionals getting together and having fairly high level conversations and sharing best practices.”

Amy Goldbas described how, when the HOT School program first started with a cohort of five schools, the TAs received professional development and provided stability

through consistent high quality arts coaching to teachers. Since some teachers who had received professional development might transfer out of a HOT school or move into a different position, the TAs would still be available to continue supporting the program. The TAs also provided a “thread that ran from the Summer Institute throughout the school year to keep people energized and connected and to extend the learning that they did at the Summer Institute.”

According to Amy, the HOT leadership had decided early on in the program with the first cohort of five schools that “if we invested heavily in the teaching artists we had a group of people who could then build a bridge to the school for strong arts, arts integration and democratic practice, so we extended their professional development extensively.”

The TAs continued to be a key element in sustaining a HOT School program and creating a network of educators committed to the HOT approach. Regardless of the transitory nature of teacher and administrator positions, the program succeeds in keeping everyone connected through the large network of support for teachers and schools at all stages along the HOT continuum.

Process rather than product. The HOT Schools arts-integration program put an emphasis upon the process, or learning experience, rather than the product, or finished work. The emphasis on hands-on workshops at the Institute appeared to be focused on helping teachers understand the process of learning through the arts as their students would experience it. The idea of process rather than product in learning and art making permeates the HOT philosophy and is evident on many levels as an important ideal in the

HOT Schools approach.

This concept was applied to student presentations that were not necessarily polished performances, but were clear indicators of learning and student leadership through the HOT program. For example, a second grade teacher described how her class acted out a story they had read and performed it for the whole school. The teacher emphasized that they spent only two days in preparation for the performance, and did not spend much time on the typical production values such as costumes or sets, because the emphasis was not on giving a perfect performance. “It was not the product, it was the process...and that really resonates with HOT schools: it’s the process, not necessarily that it looks pretty or sounds perfect.”

The HOT program’s emphasis on process rather than product was acknowledged by an international school principal, who described the gains her students made through the arts as alternative, nonverbal modes of communication, and as a way to expand the learning potential of second language learners. The principal described the efforts to understand and demonstrate the process of learning through the arts in her building:

Another structure was doing our assemblies at the end of each quarter. At the end of each quarter we were supposed to present on the international theme and we really were trying to push the notion that this was demonstrating learning following HOT; this was arts integration/ higher order thinking and to talk about the process not the product, and that was another vehicle which we were trying to help teachers to work with the concept of HOT, the process and the learning.

A presenter at the Summer Institute acknowledged the importance of process and

creativity but also stressed the need for standards:

... the people in arts community I think really do have to make sure that they are providing rigor as well as creativity, that creativity can still be rigorous ... so if there's a way that we can marry those two philosophies that would be ideal. That means there's got to be standards... that are about product as well as process, and that there's a legitimacy to the concern.

It is important to note here that Strong Arts are a pillar of the HOT Schools approach, and as such the program implements a rigorous arts curricula connected to national and state standards. That said, some performances do not emphasize arts learning as a primary or as a co-equal goal of the program. Rather, these types of performances are used to demonstrate learning, celebrate the arts, and communicate the benefits of the arts and arts-integrated learning to parents and the greater community.

HOT PD is hands-on and student-centered. While I discussed this sub-theme under *teacher benefits*, here I focus upon the use of this strategy in professional development rather than the benefits of doing so. Here I offer specific examples of classroom strategies used in PD that helped teachers see their lesson activities from the perspectives of their students. What I observed that made the PD student-centered was how the presenter took on the role of teacher, and all the teachers in the classroom became the students.

Hands-on strategies were utilized in each of the workshops and sequential tracks I observed. These strategies frequently employed cooperative, group activities such as the one pictured below in Figure 4. This was an activity in a session from the sequential

track, “Multiple Intelligences-Multiple Solutions,” where all of Gardner’s multiple intelligences were used except verbal. In removing this one intelligence, students would need to use the others to a greater extent. This was used to create a more level playing field in the classroom, as students who were ahead of their peers verbally might now be at a similar level to others with a different dominant intelligence. In this activity, a panel with a picture on it was given to each member of the class, and was kept face down until everyone had their panel. The objective of the activity was to work as a group to put all the panels in sequential order. With music playing in the background, everyone studied the panels and many were shifted around until the sequence was finally solved. Nonverbal communication was utilized throughout the activity, although laughter was occasionally heard as teachers scrambled to solve the puzzle, and without the benefit of verbal communication, the “ah ha” moments appeared to be viewed as major events.



Figure 4. Using non-verbal communication, teachers place panels in sequential order.

The hands-on strategies were effective but could also be intimidating for initial teacher participants in AI PD. A workshop presenter described how she would approach a first-time teacher participant who might need encouragement to take risks in hands-on activities, and also emphasized the importance of having administrators partake in this type of PD experience:

HOT Schools program evaluator Louise Stevens viewed the hands-on strategies as an important strength of the Summer Institute, as it was an effective means of teacher education in student-centered learning:

The Institute's strength ... is putting a teacher in a position of learner and to be very vulnerable and very joyful within that and a lot of chance to - it's not "here's how to do this so that your student is going to have fun." No, you were the student, you were dealing with it directly one-on-one and then by being the learner yourself and describing it back to the rest of the group, you came away with the knowledge base.

Workshop presenter Louise Pascale (author and Associate Professor of Education in the Creative Arts in Learning Division of Lesley University, and a longtime HOT Summer Institute presenter) stressed the importance of doing arts-integrated activities, not just reading about them. Her sequential track at the Summer Institute, "Deep Learning: Making Social Studies, Science, and the Arts Visible, Viable, and Valued," featured hands-on activities:

At HOT they had to make a chant that demonstrated their knowledge of habitat fragmentation so they had to somehow show the problem and the solution. And I

said, “You have to add movement to it, you can’t just chant it.” Kids and anybody will remember it not just from what they were saying but from their movement.

There are ways to integrate movement all the time. Again it’s [the] teacher saying “oh, right” - once they do it - that’s another thing - teachers need to do it themselves.

Louise used another example, she described the process of writing “I Am” poems where she had teachers write a poem before they had their students write one in order to show the students what they had written.

Teachers need to take the same risks that they ask their students to do and we need to tell them we did it and say “here’s mine, you can read mine.” It means something. And I have written this series of books and in truth you have to do it, you can’t just read about it. I don’t think it makes sense really. You have to experience it and you yourself as a teacher need to know and say, “That’s what I went through to do this. Now I see what I have to do with the kids.”

The above quotes illustrate how the hands-on PD strategies help teachers gain the perspective of the student. The student-centered strategies as experienced by the teachers appeared to have a profound effect on their planning and classroom instructional techniques. The most important effects of these PD strategies are the enhanced abilities of teachers to understand and thereby reach students more effectively in the arts-integrated classroom.

HOT builds *community*. In this last theme I detail the effects of the HOT PD program upon the entire school community. While I have already mentioned these

effects to some degree in the discussion of the themes *teacher benefits* and *student benefits* above, here I focus more specifically upon the far-reaching effects of all the elements of transformation engendered by the HOT program, including the transformation of the learning environment.

Collegiality. HOT PD enhanced collegiality and communication among teachers, between teachers and teaching artists, and between teachers and administrators in the HOT program. The HOT program provided various opportunities for teachers of different subject areas to discuss, present, and plan toward a common goal of integrated instruction. The opportunity for planning across the curriculum was crucial to the fulfillment of the HOT program and was best realized with creative scheduling during the school day that allowed teachers to meet. A HOT strategy for providing large blocks of common planning time is called “HOT Blocks. This planning time was scheduled by the principals in each school for cross-curricular collaborations between grade-level teachers and arts-specialists. HOT Blocks are an intervention model created to support students in Scientific Research Based Interventions (SRBI), through arts-integrated learning in language arts and math content (Koba, 2015a). Several teachers emphasized the effectiveness of teamwork and sharing associated with HOT Blocks, which provides them time to brainstorm, discuss, and map out their integrated curricula. Communication and collegiality are fostered through such organizational structures that are necessary to create a school-wide integrated program. The brainstorming and co-teaching resulting from collaborative planning was considered by many teachers to be an effective form of AI PD.

Many teachers at the Summer Institute commented on the increased collegiality in their schools, as a result of working closely together in the HOT program. By contrast, the typical public school setting does not allow time during the school day for collaboration between teachers of different subjects, and teachers generally do not work closely together unless they are part of a grade level team with common planning time. An integrated program cannot exist without close cooperation between the teachers of the various subjects. Collaboration is a necessity to the HOT program, and in order for everyone to understand each other, there must be a common language applicable to all classrooms and relevant to all teachers. This is established through participation in PD that includes all stakeholders in the educational community: teachers, teaching artists, administrators and parents. With a common vernacular, teachers and administrators can communicate more effectively, as well as with teachers and students. Parents who attended HOT AI PD were also given a vocabulary with which to discuss their child's progress in the classroom. An example of common vernacular is the use of the terminology associated with multiple intelligences, such as mathematical intelligence, or the use of the term "modalities" as in presenting a lesson in multiple modalities to address diverse learning styles.

This common vernacular is an important byproduct of another hallmark of HOT Schools PD; it is designed to include all members, or stakeholders, in a school community. The result of this approach is a strong, supportive network that includes teachers, teaching artists, school administration and parents. Importantly, it also fosters clear communication between teachers and between teachers and students to support the

teaching and learning process. Christopher Eaves, the HOT Schools Director of Professional Development, articulated the importance of including a school's entire teaching staff in PD:

When you talk about whole school reform and professional development ... we try to have all the teachers present for these professional development opportunities. ... Even if one teacher chooses not to value or use these approaches in the classroom, they will leave with a common vernacular or nomenclature ... They will have a shared language so when they hear other faculty members talking about "oh, this is a perfect example of Democratic Practice," or "this is definitely strong arts," they'll know what's going on, so that's significant. And if the kids use those, if a child goes into math and says "Mr. Rogers (and Mr. Rogers is not using arts integration or arts particularly in the classroom) you know, I am math smart, I have mathematical intelligence," ... if he has gone to that PD he's in the same ballpark as the people with whom he is working.

When asked to describe the strengths of the HOT program, one participant who was a former parent, a teacher, and now a workshop presenter, emphasized how the HOT program "forces teachers to talk to one another and integrate across the curriculum," avoiding the isolation that is typical for many teachers who get caught up in their own content and curricular demands, especially on the secondary level. A music teacher offered the perspective of an arts specialist on the effects of the HOT collaborative process: "What it does for collegial relationships and musical respect in the building is staggering; because everyone gets to cooperatively teach with their own strengths and it

is really a very rewarding thing to see.” A veteran teacher who had been with the HOT program for many years described how HOT PD fostered collegiality between teachers and administrators by extending their communication beyond the typical mundane concerns to a more meaningful level with a shared vision for school improvement:

I think it has helped collegiality. I think spending a week at the Summer Institute or a weekend with an administrator and immersed in talking about how to improve what we do as a school for our students is really a great experience...I felt very fortunate that we're all rowing the boat in the same direction.

Classroom teachers increase artistic skills through collegial support.

Classroom teachers may increase their skills in the arts by integrating with arts specialists. In her interview, Louise Pascale emphasized the importance of understanding the nature of integration, and the necessity of skill building in the special areas to support the classroom teacher in integrated instruction. She offered the following example:

The classroom teacher should be including music in their curriculum, let's say - or movement – whatever it is, but they should also go to the music teacher and learn skills which the classroom teacher probably does not have the skills to teach. The music teacher's doing skill building in music - and if it relates to something they're doing in the classroom - fabulous. They can be doing skill building in music around habitat or whatever curriculum they're teaching.

Teachers frequently remarked in their interviews that they had minimal artistic skills or lacked experience in the arts. However, through collaboration with arts specialists in their buildings and participation in the HOT Teaching Artist residencies

they felt empowered to integrate the arts on a higher level than they would have been able to accomplish on their own.

Organizational support for collaboration. In order for extensive collaboration and integration to occur, organizational structures are needed to support ongoing dialogue between teachers. For example, a principal of a HOT school described her efforts to encourage and support communication between teachers by organizing “faculty meetings about where we are” and to set up systems for conversation between the faculty to be more systematic.”

Collaboration between the arts specialist teacher and the classroom teacher can have far-reaching benefits beyond what the classroom teacher may typically expect. Louise Stevens, program evaluator at the Summer Institute, emphasized the special contributions that the arts specialists bring to general education. She stressed how the contributions of the arts are not necessarily related to performance but are intertwined with various intellectual pursuits to expand thinking and learning:

I think so much of ongoing integration is not performance-based; it is history interpretation, aesthetics, theory, it is all the other learning that the music educator or a visual art educator brings the classroom teacher and brings to the student.

Parental involvement. The HOT program enhanced relationships with parents. The support of parents is crucial to the success of school programs, and the HOT program is no exception. In this next sub-theme, I illustrate how relationships with parents were cultivated in a welcoming HOT schools environment.

Parents were surprised and impressed with how they were welcomed not only to become active members of the HOT educational community, but also to attend PD sessions alongside their children's teachers. At the Summer Institute I interviewed one parent who was also a high school teacher. Not only was she pleasantly surprised that she was permitted to attend, but also that she was strongly encouraged to do so by the administration and that the HOT School budget would cover the cost. She made the request to attend the Summer Institute and within days was notified by the principal that she was accepted into the program. She also commented that at her daughter's HOT school there was "lots of parent involvement," and that "it's always very welcoming there and so my experience there has been nothing but positive."

When asked if HOT PD had influenced relationships with parents, one teacher emphasized the roles of parents at the planning level and in preserving funding. The parents who had been a part of the planning for programs like teaching artist residencies or who participated at the Summer Institute were key in educating other parents about the HOT program and in preserving funding. The issue of preserving and generating funding is crucial, as one teacher explained:

... the school that elects to participate in HOT Schools after five or six years needs to provide the funding almost exclusively on their own for the program. And so building parent support and community support is key. I think having parents on the committees and having parents attending the Summer Institute or some of the Leadershops help those parents to be very informed and to be able to explain the value to other parents and to community people.

Program evaluator Louise Stevens summed up the importance of parental involvement at HOT Schools by saying, “The more you really build excitement with your entire faculty and with the parents and your school board, and you get them involved, the better it’s going to be.” This can also be the key to obtaining administrative support, which can influence financial support to sustain arts integrated programs. Another HOT strategy that offered a key to gaining administrative support was to provide PD designed for principals and other administrators so there was a deeper understanding of the value of AI.

HOT builds community. I observed a strong sense of community among participants at the Summer Institute as well as at the John Lyman School. The ability of the HOT program to foster this community building appeared to be very important to teachers who expressed how they felt respected and supported as members of HOT Schools. The HOT program also fostered mutual respect between teachers and students. The result was a close-knit community where teachers felt supported and students felt safe to take risks, while an effort was made to ensure that no one was made to feel different or inferior in any way. A special education teacher described the atmosphere in his classroom as one of mutual respect regardless of their special needs, which were handled discreetly and students accepted one another as equals:

...you can’t tell who is ESL, you can’t tell who is special education, you can’t tell who gets free/reduced lunch, you can’t tell who had a rough day you can’t tell anything about their life ...and it’s not that every child is the same but everyone treats everyone with respect.

A parent described the positive impact of community building on her daughter's early school experience, which began with a difficult adjustment period in kindergarten and first grade. She explained how, as the year progressed, her daughter felt more secure in the HOT school environment: "She's not a risk taker - and as the year went on she became better at taking those risks and more comfortable. And I think it's the whole process of the students understanding that it is a safe place."

The HOT program PD provided continuity throughout the school year and functioned as a supportive network of teachers and teaching artists, providing ongoing feedback and resources for teachers. One teacher was surprised at the difference between the HOT program and other PD regarding constructive feedback and the resulting changes that were made:

I've been to other workshops for education but this is the only one where they get their feedback sheet and they read it and they change. ... They will email you if you have a certain concern. ... I had a question for a teacher and I put it on there and I got an email...two weeks later and [then] going back and forth during the whole year asking how things were going. That's what this does; this community brings teachers, artists, parents, principals, everyone together.

Program evaluator Louise Stevens summed up the HOT program's commitment to community building as one of the chief strengths of the program:

I think it's remarkable to have any program where the people in it invest so much in the happiness and the wellness of the school community, and I really do believe it is that personal deep investment in using this set of tools to foster happy school

community that really sets HOT Schools apart.

The happiness expressed by teachers in interviews, and that which I observed as exhibited in the workshops and sessions at the Summer Institute and John Lyman School, appeared to emanate from several aspects of the HOT experience. I observed the major sources of this to be an increased sense of efficacy and the level of collegiality that seemed in particular to increase throughout the week of shared experiences at the Summer Institute. Teachers were comfortable with one another in the hands-on activities and seemed to appreciate that most of the presenters were teachers or former teachers. One of the most effective HOT strategies appeared to be having teachers learn from other teachers, as was discussed in detail in the findings above. These elements together worked to create a community environment that was a safe space for teachers and students alike, where the contributions of each community member were respected and valued.

Transformation of the learning environment. AI through the HOT program engendered transformation of the learning environment, student-centered learning, student ownership of learning process, and improved teacher-student relationship. While this sub-theme overlaps somewhat with the categories of *teacher benefits* and *student benefits*, the way in which this sub-theme relates to the larger educational community is in the impact it had on all stakeholders. The transformation of the classroom environment extended to other members of the HOT community beyond the teachers and students. Parents were actively involved, as were local artists who took part in the Teacher-Artist Collaborations. Collegiality through shared experience in the HOT

program thereby extends beyond the teacher relationships to members of the larger educational and local community. This is important because the stakeholders who participated in HOT AI PD developed an understanding of the crucial role of the arts in learning and this understanding worked to cultivate ongoing support for the program.

Issues

There were really two basic sources of the challenges associated with HOT Schools, that of support structures and sustainability. In this section, these two issues are first introduced and then supported by a discussion of the related sub-issues.

Support structures. The creation of a whole-school arts integrated program requires administrative leadership to help create specific organizational structures that allow for collaboration between all faculty members and sufficient time to plan and coordinate lessons. Support structures can be related to budget concerns which can impact a school's ability to implement the Strong Arts component with designated teaching spaces and full time arts teachers.

Administrative PD and support. Christopher Eaves, the HOT Director of PD, stated that in order for an arts integration program to work in the public school, the administration and the leadership must be committed to the ideals of arts integration. Eaves elaborated on what he would say to an administrator contemplating the HOT program, and in doing so illustrated how he would turn the discussion toward determining the value of the arts in everyday life:

... We might sit down and maybe the first question I would ask is, tell me about the experience of the arts in your life. When was the last time you went to a

museum? Do you like to go to museums? What kind of music do you like? What kind of visual art do you like, if anything? Music is a great place to start because everybody likes music. What kind of music do you listen to? Is there any kind of music you don't like? Why don't you like it? And... try to elicit from the administrator what value they see in the arts - just start with the arts. Then we could unpack that and compare that to the value of education and learning. I would ask the leader to [become involved] in some sort of arts integrated professional development and get their feet in the water. I'd want them to know what it looks like and feels like, so they know how to help their faculty.

I asked Amy Goldbas, the HOT Associate Director for Programming, if there were professional development plans specifically for administrators, and how they would be helpful. She explained that there were mandatory, two-day retreats for principals each year, and this is done for three principals annually. The PD was based on topics chosen from feedback gained from the principals on their most pressing needs or concerns. Even though HOT offered a PD track exclusively for principals, Amy observed, "it's almost more valuable for them to be working alongside their classroom teachers in another track so that the teachers feel a collegial bond with the principal and the administrator." It therefore would seem that both the specialized and general teacher PD sessions were valuable for administrators in different respects and both were seen as necessary for a fuller understanding of the value of AI instruction.

In order for a school to join the HOT program it was imperative that all levels of administration received ongoing PD. In the words of HOT Schools Director Bonnie

Koba, “the only way to make change is for schools to participate, for teachers to come to professional development, for the principal to come to principal meetings, for the principal to be at the Summer Institute.” She also emphasized how the administrative support must ultimately come from the highest level, as principals and teachers must be released for PD:

This is a program that thrives on professional development and so if teachers are not released to participate and principals are not allowed to attend principal meetings - which is just an incredible structure for networking for administrators to talk about the challenges they face and to find solutions to those challenges together - it’s very difficult to make progress and it’s difficult to sustain the idea of the concept and the philosophy. And so that’s another key issue is support from superintendent and Board of Ed and curriculum directors.

One of the issues, then, is that in the public schools the administration often does not see the value of the arts, or do they do not see the value of arts integration in relation to student success and achievement. I asked a presenter at the Summer Institute and board member of an AI after-school program in Philadelphia what she would present or say to administrators to try to convince them to support AI; in other words, would she do a presentation like she did at the Summer Institute, or is there other evidence of student success that she would show them?

Yes, absolutely. And that’s why when we make our performances, we don’t make it just about the arts and why they are so beautiful, because nobody believes in art for art’s sake anymore. We are not promoting art for art’s sake, we are

promoting arts for social justice, social development, social impact, needs impact, family development, key components, and bilingual approaches. ... So what we actually do is lead by example, collect the data from our students, collect data on academic improvement in language and the subjects where we're struggling the most and really show that one period a week with the tutor is not really working.

I asked the principal of a HOT school if she had any advice to give an administrator who might be considering that their school become a HOT school or to give to administrators above the level of principal in certain districts where not all schools are HOT schools. She used Common Core as an example and her candid reply also gave a realistic picture of a principal's experience:

Yes, I would say it is consistent so much with what the Common Core is asking right now. If they see that connection in integration and they are helping students reaching the higher order [thinking] just processing information, because they have to almost experiment with it. It's not just information from a textbook, but Common Core is asking for presentation and all the components of the Common Core, the point of the HOT philosophy, the higher order thinking.

This perspective from a principal showed how the HOT educational process is not an initiative that falls outside the current emphasis and goals of education. It is not "something else, something different." as the principal stated earlier, but is relevant and speaks directly to the most fundamental concerns of higher order thinking.

In order to apply the HOT philosophy at the most effective level, there must be organizational structures that support communication among the faculty on a regular

basis. Teachers need time to plan, and they need a schedule that supports their efforts to create AI curricula. Scheduling and time are crucial resources that appear to be surprisingly minimal at some HOT schools. This was not necessarily the error of the schools, but was often related to addressing the overwhelming numbers of district and statewide initiatives. Following are more details on this second most prevalent challenge faced by teachers in the HOT program.

Scheduling and time. With regard to scheduling and time, teachers usually responded that there was never enough time for curricular demands to be met in addition to other initiatives or special projects. As one former teacher and current TA explained:

They [the CT public schools] are getting much more rigid with what's being required and there is less time for creativity. Here in New Haven at least, there are more requirements tied to the curriculum so there's not as much time always do a large-scale project that has a broader approach or an approach that may be creative and not as easily assessed. So the biggest problem is that there so many demands on teachers with what they should cover every day. The second thing is the time for planning across the curriculum. For example, when I was in school I never had common planning time with the social studies or language arts teacher or art teacher or for that matter arts teachers, so the kind of planning we did was in hallways or at lunch or ... wherever.

There are certain circumstances under which teachers had never tried to integrate the arts. A few teachers expressed that they found it challenging to work with other

teachers because of the schedule restrictions. For this and other unspecified reasons, they had difficulty getting started with AI. Christopher Eaves offered these insights into the problem:

So much of our success in teaching with arts-integrated methodologies, or having co-teaching models between the arts teachers in the school and classroom teachers, is the culture of the school itself. We need to engender school environments where the school leadership is dedicated to providing the resources to allow the educators to have time to cooperate and be able to take risks in their instruction and their curriculum design, to foster arts-integrated instruction, and to give students the opportunity to take leadership in their learning. That's a lot, but when we talk about HOT Schools we're after all those things at once.

The above statement emphasizes the need for preparation time to sustain the multi-faceted approach of the HOT Schools program. The ongoing PD for administrators was designed to help increase the likelihood that teachers would be given the necessary resources and collaborative planning time across grade levels and subject areas in order to fully implement the program.

Scheduling and time in the individual schools was mentioned as an area in need of improvement, as this was not consistent among HOT schools. It seemed that the scheduling element varied among HOT schools, where some administrators appeared to be more committed to the collaborative planning process than others. An experienced HOT school teacher who had recently been asked to act as a coach-facilitator expressed the following concerns about time and scheduling:

I think what most teachers would say is that they need time. They need time to process, they need time to talk to each other, they need time to plan with the teaching artist which generally we had at [our] school and one of the things I'll be noticing as a coach facilitator with the schools I will be working with - and all of us as coach facilitators will be doing - is ascertaining what kind of time there is for planning, what kind of time there is for debriefing, for reflecting, the planning for the following year. So I think those are the next directions for us.

As the above quote illustrates, the HOT Schools PD program included coach facilitators whose roles were to be expanded beyond the classroom to include support for teachers in the area of scheduling. Time was needed for planning and to allow teachers to meet, reflect, and share their successes and challenges in implementing the HOT Schools program.

The data revealed that certain HOT schools were in need of additional planning time during the school day. Two teachers from the same school were in agreement about the need for more time to work on AI curriculum, and revealed it was necessary to add planning time beyond that which was allocated. The first teacher explained: "Our assistant principal makes the actual schedule during the day. But planning is a lot before school or during lunchtime and maybe during common prep time, or after school." The second teacher expressed that she heard from other teachers that their schools do things differently, and would explain how their scheduling worked. She also commented on the need for collaboration time: "The one thing someone said to us, it would be wonderful to have some collaboration time incorporated into your schedule, which we don't at this

point, which again, would be nice.”

The above quote revealed how scheduling was handled differently among various HOT schools, with some providing more planning time than others. The teachers above emphasized the need for common planning time during the school day in order to collaborate more effectively with their colleagues. It appeared that scheduling was an issue that needed attention at their school.

Another teacher revealed how planning time had been lost due to standardized testing and other district initiatives, but teachers were creative in making time to collaborate and had developed their own means of communication in the form of a shared journal:

We lost more time which we used to have to do lots of stuff. We used to have two or three blocks a month to really talk about this and make HOT Schools a success in our school; that time is gone now. It's time to look at data, look at charts, look at graphs, look at numbers for tests. But people now do it after school, before school, at lunch. I have a colleague now, we meet at lunch and we talk about what we're doing this week for HOTS and how we can make it better for everyone. And we have a journal that we pass around the school and there are good ideas, and it and it sits in our staff room so people can look at it. It's a program that works.

Bonnie Koba acknowledged the time constraints and the demands on teachers while emphasizing the need for schools to restructure their days to provide appropriate scheduling that reflects the HOT philosophy:

I think that for schools that wholeheartedly believe in this (HOT) process and want to be part of it and they really participate at very high levels, the most common challenges are really about scheduling and time. Often some of the challenges are about resources but I think mostly it's scheduling and time. So if you have folks that really believe in something, it's about figuring out how to restructure slots within your day to be able to allow for different things to happen - the types of things that you've seen here today. I believe entirely that if teachers are not learning to integrate they're going to be hard-pressed to be successful because there are so many things that they have to do in the course of the day. And if you look at their recommendations for instructional time in different disciplines, you'll see that there's more time required or recommended than exists in the course of the school day.

In view of the above demands in the regular school day, it appeared that a creative approach to scheduling may be necessary in order to provide adequate common planning time in HOT schools.

Support for Strong Arts. When schools apply to become HOT schools, they must show support for Strong Arts and the ability to implement it, but the HOT leadership is not in a position to directly influence school administration or avert any of the circumstances that could potentially affect the commitment to Strong Arts.

Although the HOT Schools philosophy emphasizes Strong Arts programs, and recommends this to schools, the HOT staff are not in the position to enforce their inclusion, as was explained by Amy Goldbas:

But in terms of difficulty in implementing with strong arts, the HOT school program does not have the wherewithal in terms of funding to say to a school you must have a certified visual art, dance, music, and theater person in your building full-time in order for students to be fluent in all the arts. That's a decision made at the district level and, as you know, the arts are often either targeted first for cuts or are not fully funded some way, based on district priorities and budgets. So, that one's a difficult one from that perspective. But it's certainly an easy one for us to articulate why it's critical for every human being to be engaged in strong arts learning.

Amy further explained how, when schools make the commitment to become part of the HOT schools program, there are many questions for school leadership regarding the level of commitment to Strong Arts and professional development:

So then the principal or the leadership team of the school has to take stock of what will this journey look like with these players, and so that's step one. The next step is to really explore, what do you already have in place? Do you have arts teachers in your building? Would you have the wherewithal down the road to expand that? Are you at the state recommended guidelines for arts teacher time with your students? What does that look like, what are the facilities, is art on a cart, are there dedicated spaces, etc. We look at all those kinds of things and then we go and do a site-visit to figure out what the culture of the school is, and interview people, interview parents, teachers, administrators and look to the district also for guidance to see, are they going to support this? Will teachers be

released for professional development? Because really what HOT Schools is, is a professional development opportunity that becomes a network of schools, a supportive network of schools.

The above statement illustrates how becoming a HOT school is a multi-faceted endeavor, requiring the participation of multiple stakeholders in the school community. It also demonstrates the extent of involvement on the part of HOT program leadership in researching and clarifying what is needed in terms of staffing and facilities in a potential HOT school. Finally, it emphasizes how the PD program functions as a supportive network, providing assistance and resources for schools at various stages of program implementation.

Another facet of this issue relates to how the arts are valued for purposes beyond performance, and whether this is the philosophical stance of the community and reflected in the school climate. This was articulated in a comment made by a Summer Institute presenter when she said “nobody does arts for arts’ sake anymore.” This would imply that some only see the arts as utilitarian in learning rather than having far-reaching influences on the individual and society. The HOT philosophy views the arts as part of a holistic approach to education, with far-reaching effects on learning. If the school administration and community hold this perspective on the arts, then it appears more likely that Strong Arts would be supported.

One of the hallmarks of the HOT program is that it can be adapted to suit the needs of the individual school. The HOT leadership staff is committed to helping schools accomplish their goals despite budget constraints or other issues. Bonnie Koba

acknowledged the disparities among schools in the scheduling of arts classes and the range of budget allotments per child. She explained how, regardless of where a school was on that spectrum, the HOT leadership would “address the issues and let’s figure out how we develop plans that will serve you so that no matter what you look like or where you are.”

The HOT leadership is working to develop ways to help schools build strong arts programs despite the lack of full time arts specialists. For example:

Where strong arts comes into play is what’s happening in the district, can they have a full-time arts teacher, are they sharing - that’s something we don’t have control over. So having that strong arts component in a school is difficult for us to work with. However, we’ve started structuring our professional development like the “Teach Like a Pirate” day that was really designed for art teachers. We’re looking to reach out to them in different ways since we cannot control what the district allows them to have for strong arts.

As stated earlier, the HOT component of Strong Arts is a key element of the program, but it is challenging for some schools to implement and sustain this. According to Amy Goldbas, the ultimate decision about the place of the arts within a school or school district was an “ideological challenge” in “getting the arts to be recognized as equal partners in education.” This points toward the importance of HOT AI PD for administrators that may increase the awareness of the positive impact of the arts within a holistic view of education.

Financial concerns. Amy Goldbas explained how financial concerns posed a challenge in implementing and sustaining the Strong Arts component of HOT schools as a matter of school district control over staffing and budgeting. In other words, there were varying levels of commitment to quality arts education at the highest levels of administration, which might negatively influence the decisions made whether to continue to support arts programs, particularly in schools in depressed economic areas. A school may begin with a strong arts program, but if budget reductions occur, the commitment to the arts may suffer as they may be regarded as dispensable in favor of other programs, especially if those other programs are affected by financial issues. The ongoing acquisition of resources was described by a teacher at an established HOT school as “a big challenge,” and a teacher at another HOT school described how the number of teachers who attended PD events throughout the year had decreased due to funding issues. As discussed in Chapter Two, financial challenges may affect a variety of subject areas, and when program or staffing cuts are made, the arts are frequently targeted. During these difficult times, the will to support Strong Arts on the part of school and district leadership must prevail in order to preserve this essential component of the HOT schools program.

Teachers mentioned financial concerns frequently, as limitations in funding negatively impacted their opportunities to attend PD, thereby limiting their ability to implement the components of Strong Arts and Arts Integration. A special education teacher observed how fewer teachers in his district attended PD due to financial restrictions, and explained “...we don’t have lot of money, so the budgets are cut so we

only can send three people at a time; we can't send the usual eight that other schools do.”

A teaching artist/presenter expressed how the one area of improvement needed for the HOT PD program was funding. She stated her belief that all CT schools should be HOT schools, but cited funding as the primary impediment toward this goal, pointing toward the state legislature as the source of the problem. She expressed the need for clearer knowledge of what types of funding are available to schools, and that schools should be informed on the procedures for grant writing.

The availability and type of funding varied from school to school, with some schools having certain advantages. The principal of an international school stated how they had been able to have TAs come twice per year, as they were a magnet school and as such there were monies available to cover the cost. The frequency of TA visits to schools is therefore affected by budgeting, which evidently varied according to the type of school. It would seem that there was a need to rectify the situation so that all HOT schools could afford to have regular TA residencies, as this was a significant aspect of the HOT PD approach.

As described above, the issue of finances and budgets are largely out of the hands of teachers and HOT school directors. The only way to resolve such issues with regard to supporting strong arts and arts integration is for the highest level of school district administration, the local school board and the state legislature, to share the HOT school vision and take steps to provide financial support.

Sustainability. There are several reasons why a HOT Schools program may be difficult to sustain. The challenges related to sustainability that surfaced in the interviews

were the transitory nature of positions in the schools, program inconsistencies regarding equal implementation of the program's core components, support of strong arts, and financial concerns.

Transitory positions. A common occurrence in public schools is that teachers and administrators may move on to other positions after they have received PD in the HOT program. This scenario appeared to be a major concern, as it was discussed by all of the program staff I interviewed. I learned from HOT program leaders that administrative support can change suddenly in HOT schools and can potentially bring the program to a halt if the new administrator does not share their predecessor's vision. In an effort to provide stability for the HOT schools, Amy Goldbas decided that, although teachers and administrators may move on, the TAs who worked independently from the schools could become a stable resource:

We also realized that we needed really to invest in the teaching artists in a much deeper way for the continuity of the HOT Schools program because they were more stable, in the sense that we knew we could find them. Teachers, we would professionally develop and they would become principals and go on to be superintendents, or they would move to another school, or take a pregnancy leave - they would do all kinds of moving around. ...And it's a process that changes continually, as I said, with leadership changes and faculty changes, and all of the things that happen because we're working in public schools and this is what happens. So it's very important to keep in mind that it is this process of becoming.

A change in administration could ultimately signal the end of HOT school participation, regardless of the level of commitment of faculty members, or of the length of time in the program. Goldbas described such a scenario:

Initially when we first started out – I can remember in 1999 – we had a school where it was the gym teacher who wanted this to happen, who led the charge to get the application and to become part of the process etc. It took root in that school for probably five or six years, and then when the administration left that had supported that teacher's going after the HOT Schools program, the next person who came in really shut it down. So we really do have to have leadership involved.

A new administrator might not be aware of the benefits or believe in AI instruction and may prefer to lead the schools in other directions. Goldbas explained:

The next thing is about a change in leadership and support from the district and the Board of Ed. So often in the larger districts we have an issue of a school wanting to become a HOT school, the staff is on board, the parents love the idea, but you have a changeover in the Board of Ed or superintendent that doesn't really understand it that it's like something else they need to get their mind around - it wasn't their idea - they have their own new ideas, and so they allow it to continue but they don't really support it and that's almost sure death for the school in terms of participation.

Christopher Eaves, Director of HOT PD acknowledges the transitory nature of school positions as one of the biggest challenges in maintaining the HOT program:

I think one of the biggest challenges and this has to do with arts integration and arts education and education in general. One of the biggest challenges for me seems to be the amount of the transitory nature of the educational system. So, we will provide a tremendous amount of training, but then through powers beyond our control the administrator leaves. Let's imagine you have invested in a school for over three years in training for the leaders and then they're no longer there, five members of your team are missing. That's tough because we talk all the time about building what I like to call collective capacity, because I think so much relies on the collective nature of things.

Program inconsistencies. I noted inconsistencies among HOT Schools regarding the level of involvement and commitment to all three components of the program (Strong Arts, Arts Integration and Democratic Practice). Schools that implement the HOT program may experience challenges in maintaining all facets of the program with equal vigor. For example, the changeover of staff as well as budgetary cuts may impact a school's ability to sustain the Strong Arts component. In another example, the arts are frequently cut in times of economic crises, as discussed in Chapter One, and may thereby lead to inconsistencies among the three major components of the HOT program.

A quality of the HOT approach that was viewed as a strength was also recognized as a possible cause of program inequities. Program evaluator Louise Stevens pointed out how the HOT Schools program is not a "cookie cutter approach" but rather it is flexible and adaptable to the needs of the individual school. She also noted that, although this is considered one of the strengths of the HOT program, this very same flexibility might also

lead to schools not committing to all three components of Strong Arts, Arts Integration and Democratic Practice. The HOT program was also described by Amy Goldbas as “a process of becoming,” and for some schools it can take time to achieve full status. Although schools might desire to fulfill all the requirements of HOT, there may be various reasons why that does not happen, some of which are out of the hands of teachers and even principals. The program staff is aware of this and is working toward solutions to remedy inequities among HOT schools:

I think it remains a challenge in every program, not just ours, and not just in the arts - when you have an initiative that comes into a school, it is competing against district, state and federal mandates at all times. So you have to have an immediate value for teachers or they just don't have time, frankly. And the other thing is that you hit what we call “the three-year wall.” Even if you have a cohort of teachers and administrators that are really valuing the work that you do, those folks get exhausted by three years. They've come to all the meetings, they've tried to be the cheerleaders in their school community, they do the work in their classrooms, they work with the parent community etc., but as they do that and if their colleagues don't join in, they're quickly exhausted. So what we try to do is to create processes and guidelines etc. so that it doesn't become a closed club that “we're doing HOT Schools.” It should not be that. It should be that a school looks at higher order thinking, in and through the arts and about the arts as something that is part of their school mission, and they need to align that with

their school improvement goals and go forward from there so that everyone in the school is, as they say, “pointing north.”

The above quote emphasizes the importance of shared commitment and vision among school community members. Simply put, the HOT program has a better chance of thriving if the ideals of higher order thinking through arts integration are incorporated into the school’s mission, and are supported by the various stakeholders in the educational community. This can be achieved most effectively through comprehensive, ongoing PD available to all HOT schools.

According to the HOT Schools Implementation and Operations Specialist, Kim Thibodeau, another way to help HOT schools implement and maintain quality programs that are focused upon the HOT goals and philosophy is through Leadershops, which were described as the focus of the current plan to provide ongoing professional development. The Leadershops would take place in established HOT schools in order to “show the models of what they are doing as a HOT school, and we’re inviting other schools to come and take a look at that.” Kim also mentioned that they would be “partnering with some arts organizations to see how we can work with them as far as optional services for our HOT schools.”

The issue of program quality is thus being addressed through such creative PD programs as the above Leadershops, Teaching Artist PD, and other options in partnership with arts organizations, all of which are made available to schools who are motivated to make improvements. Schools seeking to assess the strength of their programs may refer to The HOT Schools Continuum of Participation (Koba, 2014b), a guide provided to help

schools identify their current depth of practice (See Appendix M).

The Continuum delineates central aspects of the HOT program in order to help schools develop plans to advance along the Continuum through three major areas: Arts Access, Arts Connection and Correlations, and Arts Integration. The Continuum helps the HOT Schools program directors to recognize the value of each school's place on the Continuum and encourage progress. HOT Schools offers the necessary PD and a Menu of Services to assist schools in their movement along the Continuum, and emphasizes two important aspects affecting a school's advancement, that being staff commitment and administrative support. It is thought that any school may advance as long as these two conditions are present (Koba, 2014b, p. 1).

Whereas the Continuum of Participation serves as a tool to help schools evaluate their place along the HOT Schools spectrum of development, the Continuous Growth and Feedback Loop is used by the HOT Schools leadership to regularly conduct self-evaluation of the entire program (Stevens, 2016c, p. 2). See Figure 5. This process began in the 1990s, shortly after the HOT Schools program was established. Program evaluator Louise Stevens has been working closely with the program leadership in conducting evaluations since that time. During the past year, she worked with the HOT Schools leadership team to study "the program's growth and development over time while focusing on current practices and impacts" (Stevens, 2016c, p. 2). Upon the completion of the recent evaluation, Stevens spoke of "authentic evaluation as a parallel to authentic assessment" and explained:

Authentic evaluation is about what has been learned, how that learning is

demonstrated and what the transfer is to future thinking and understanding. And it is about learning to improve, to make the program better for all participants, so the participants in turn can benefit as much as possible...As an evaluator, I believe linking evaluation to strategic planning informs future growth and development in what I call the continuous planning loop (2016c, p. 2).



Figure 5. HOT Schools Continuous Growth and Feedback Loop

At the time of this writing, plans were underway to implement a new self-evaluation system with the use of a guide developed by Louise Stevens, titled The HOT

Schools Tool to Guide Continuous Growth and Development (2016b). This tool was designed to help schools progress along the Continuum using self-assessment and improvement strategies in conjunction with HOT program leadership. To this end, the Continuum was designed 1) to be used by school administrators and instructional teams to set annual goals and benchmarks and self-assess progress along the HOT Schools Continuum; 2) for joint use by HOT Schools coaches and school administrators to guide progress; 3) to be used by the HOT Schools Program Staff to document school improvement, design appropriate professional development and to acknowledge schools for growth & development (2016b, p. 2).

The evaluation was based on earning a possible total of 78 points to attain achievement levels indicated as Bronze, Silver and Gold in the following six areas: Strong Arts; Arts Integration; Democratic Practice: Student Voice, Choice, Participation and Responsibility; Democratic Practice: School Culture and Climate; Developing Higher Order Thinking Skills; and Cultivating School Leadership. For further specifics on this evaluation system, please refer to the complete guide in Appendix N.

The HOT Schools leadership regularly listened to feedback from its faculty members and used that information to inform their practice. The evaluation process also examined the HOT program within a statewide and national context. Louise Stevens concluded that the HOT Schools program surpassed other AI programs in its combination of core components, Strong Arts, Arts Integration and Democratic Practice and in allowing individual schools to tailor the program to suit the needs of their educational community. Stevens pointed out two qualities that contributed to the strength of the HOT

program:

HOT Schools has what many programs long for – longevity and flexibility. It has had the ability to grow organically over time through multiple growth and development cycles, incorporating the experiences and reflections of hundreds of educators and administrators. It has had a positive and lasting impact on the schools, teachers, and students it has served and continually provides professional development, serving individual educators and schools statewide (2016c, p. 11).

Stevens also reported that HOT Schools students outperform their peers, with 5% to 10% more students at or above state level goals. Teachers and coaches observed that students from HOT schools consistently demonstrated higher order thinking skills such as synthesis and evaluation, application and evaluation, creativity, interpretive skills, empathy, and self-awareness; these were viewed as capacities that would stay with them throughout their lives (2016c, p. 17).

A recent evaluation study by Louise Stevens (2016a) demonstrated how the HOT Schools program has engendered positive outcomes in efforts toward whole school reform. The study reveals that, in addition to the three basic core components of the program, HOT Schools also uses a combination of six instructional approaches that complement and support each other in the primary objective of developing higher order thinking skills. Stevens identified these approaches as Arts Discipline; Arts Integration; Democratic Classroom and School Practice; Integrated Curriculum; Student Choice and Voice, all functioning around the central focus of Higher Order Thinking Skills. Stevens found that “In an exemplary HOT School, 75% or more of the faculty have been trained

and are fluent in mixing all of these approaches to further student achievement” (2016a, p. 3).

The study described HOT Schools as “a whole school improvement approach, brought about through professional development that leads to change in instructional practice and improvement in school culture for instructors and students. This in turn leads to enhanced student engagement across subjects” (Stevens, 2016a, p. 3). The study also reported significant improvement in exemplary HOT Schools in academic achievement, student discipline issues, and absenteeism among students and teachers. Stevens pointed out that these statistics were all the more impressive because most schools that enter the HOT program are those in need of school-wide improvement, are over-crowded, and have large populations of high needs students or students at risk. The study found that, according to state accountability indicators, “HOT Schools average 16% higher for the aggregate of all indicators than other schools in Connecticut” (Stevens, 2016a, pp. 12–13). To view the complete report, please refer to Appendix O. The report showed evidence of the strengths of the HOT program and emphasized the influence of PD upon its success, as described by the author:

The evaluation found that HOT Schools is a whole school improvement approach, brought about through professional development that leads to change in instructional practice and improvement in school culture for instructors and students. This in turn leads to enhanced student engagement across subjects.

The inconsistencies of the program as discussed earlier evidently did not adversely affect the overall impact of the program on the schools which, according to the

report, were challenged by overcrowding, low attendance rates for students and teachers, and high numbers of discipline referrals. As evidenced in previous discussion, the HOT program leadership provided extensive PD for its members and was available to help analyze the needs of schools in order to help find solutions to challenges.

Sustainability of Strong Arts. In order for a school to sustain Strong Arts, the administrator must continue to support the arts through funding, staffing of arts specialists, scheduling of arts classes, dedicated teaching spaces and classroom resources. The preservation of the Strong Arts component requires ongoing political and philosophical support not only from the administrator, but also from the teachers and the greater educational community. In the words of Amy Goldbas, the arts must be “recognized as equal partners in education” by school leadership, and the sustainability of the Strong Arts component is dependent upon the preservation of this ideal for the long term.

There are circumstances that can affect the sustainability of Strong Arts, despite the initial support of teachers, administration and community. Budget cuts, transitory positions of administrators and teachers, and new district and state initiatives can redirect limited resources toward other subject areas and projects. Financial issues have had a direct impact on a school’s ability to provide and sustain full time arts staff and to provide and sustain designated teaching spaces for the arts.

Support in Handling Issues

In view of the various issues that arose in certain HOT schools, I observed a considerable level of support and understanding toward the member schools from HOT

Schools staff in their recognition that each school was a unique learning community with its own building culture. Each school therefore had needs as well as advantages that were specific to that school's population and socioeconomic environment. It was evident that the HOT directors were continually looking for new ways to assist schools in whatever areas that help was needed. One of the key attributes of the HOT program was that each school, regardless of their unique challenges, could access various forms of PD to address their situation. The HOT organization endeavored to make these PD offerings as affordable as possible to enable schools with financial hardship to participate.

Summary

Participants in the HOT Schools AI PD program were eager to express their enthusiasm and tell their stories of transforming the learning environment and reaching students through arts integrated instruction. Teachers at the Summer Institute and the John Lyman School exhibited satisfaction in their teaching. In consideration of the themes that emerged in the teacher narratives of this study, and despite the issues described above, the data pointed to one overarching meta-theme that being that the HOT Schools approach resulted in teacher satisfaction and a transformation of the learning environment.

Teachers who engaged in the HOT PD experience expressed how the program had opened their eyes to previously unforeseen possibilities in the AI learning environment. The arts are traditionally seen as something extra, and as discussed above, are referred to as a "special" and viewed by many as a subject added to the student day so that classroom teachers can have prep time. In contrast, teachers in the HOT PD program

discover how the arts are not peripheral to learning and many recognize for the first time the natural affinity children have for the arts.

One participant described her PD experience as “eye-opening, broadening my horizons, showing me the possibilities of what you can really do in the classroom to bring kids to a much higher level.” Rather than marginalize the arts as something extra or non-essential, educators could expand student potential for learning by bringing the arts to the center of the curriculum through AI, because in one teacher’s words, “it engages them and really solidifies their learning.” Teachers who have participated in HOT AI PD and have employed the strategies have expressed satisfaction in their teaching and several stated that they could not imagine teaching any other way. The resulting climate and ongoing effects of the HOT AI PD program are those of teacher renewal and satisfaction.

Chapter Seven: Discussion and Conclusion

This chapter contains three major sections that present the findings from this study on the Higher Order Thinking (HOT) Schools professional development (PD) for educators. The first section consists of a discussion of how the themes and issues align with the research questions. In this discussion I show how I analyzed the data in relation to the existing literature to determine possible connections. The linking of my findings with previous studies helped confirm the importance of the emergent themes and issues. The similarities in findings between this study and others also served to underscore the central role of the arts in education, the multiple benefits of AI for students, and most importantly, the vital role of AI PD for teachers. This study was aligned with others in identifying key elements for effective AI PD; most significantly that of teacher collaboration with professional teaching artists and the availability of ongoing PD.

In the second section of the chapter I present assertions based on the answers to the research questions. These assertions express the positive outcomes of teacher experience in HOT PD. The two themes most strongly emphasized in the narratives were the ongoing nature of the PD and the hands-on strategies that placed the teacher in the role of student. The third and final section of the chapter offers implications for future research on the HOT Schools program and the effects of HOT AI PD on teacher practice, learning environment, and student achievement. The chapter reaches its conclusion with final thoughts on HOT Schools AI PD and the resulting transformative effects on teachers' professional lives.

Research Questions

Research Question #1. What are educational philosophy, goals and specific objectives of the Higher Order Thinking (HOT) Schools program, and how do these relate to professional development for educators?

The HOT Schools program was established in 1994 by the Connecticut Commission on Culture and Tourism with the goal of creating arts-infused learning environments in the schools. The Commission regarded the arts as an essential element of education in the schools and in life-long learning. The program has served over 22,000 students in 41 schools and the program has expanded to schools outside Connecticut. According to HOT Schools Program Director, Bonnie Koba, educators from outside the state had attended the Summer Institute and other PD and had replicated the program in varying degrees.

Educational philosophy. The HOT program sought to change school culture through arts-integrated learning and asserted the belief that “The arts motivate student learning, improve the culture and climate of schools, and inspire the professional development of educators.” (Senich, Truxes, & Koba, 2007, p. 1) The HOT program combined three core components (Strong Arts, Arts Integration, and Democratic Practice), which coalesced to create a learning environment that linked the arts across the curriculum, fostered student leadership skills, and built a creative and supportive school community.

Strong Arts. The first component, Strong Arts, ensured that the arts were regarded as rigorous academic subjects, and that arts specialists had designated teaching

spaces and regular instructional time with students. The arts were expected to have sequential curriculums that conveyed unique forms of knowledge not attained through other academic subjects (Senich et al., 2015). The HOT program's educational philosophy held that strong arts programs fostered higher order thinking skills such as critical thinking, independent judgment, and creative problem-solving, a position in alignment with other studies. For example, Deasy and Stevenson (2005) asserted that when students learn to make meaning from a work of art, they "explore the range of possible interpretations" and "develop capacities that allow them to see and think about things in new ways" (2005, p. 38). As a teaching artist in their study observed, "The arts give students practice in critical thinking" which, according to Stevenson and Deasy, "can help them as they try to make sense of other kinds of information they will encounter in the future" (2005 p. 39). Similarly, Hetland, Winner, Veenema and Sheridan (2013) found that visual arts study fostered certain habits of mind they termed "Studio Thinking," and showed how these higher order thinking skills such as observing and envisioning (presented in detail in Chapter Two) were transferable to other subjects and supported the goals of Common Core State Standards.

Study participants in the HOT program also reported that higher order thinking skills enabled students to communicate their ideas and demonstrate their learning through creative, non-verbal means. Previous research supports the findings that AI instruction had multiple benefits for ESL and multicultural students, who were able to rise above limitations of language (Miller, 2011; Gallas, 1994, Goldberg, 1997). A principal of an international HOT school in this study described how the arts helped ESL students

express themselves and enabled them to demonstrate their learning through the arts. She related how the arts helped to lift a text from a book and bring it to life for ESL students who may struggle with reading or writing. She observed how, at the international school the arts enabled teachers and students to convey meaning in different modalities for students who struggle with language, thus increasing their capacity to learn. Merryl Goldberg explored the potential of the arts as languages for learning and observed “In a class where many verbal languages are spoken, the arts can be a uniting language” (1997, p. 11).

In HOT Schools, Strong Arts programs were aligned with the policies and practices of the Central Office and Board of Education. With the supportive influence of parents, decisions were made for the use of financial resources to support and sustain strong arts in HOT Schools. Financial resources varied from district to district, but when there was a commitment to the HOT Schools approach to education, schools could attain their goals through support from parents, administration, and HOT Schools staff who provided guidance, and coaching. The coaching program is described in detail under Research Question 3.

Despite the support measures mentioned above, I observed that the Strong Arts component was the most challenging to implement and sustain. The primary reason for this appeared to be the economic circumstances of individual school districts. According to HOT Schools Program Director Bonnie Koba, there were considerable differences in student budget allotments and scheduling among HOT Schools, and she described these disparities as they existed during the early years of the program:

At that time there were 27 schools - we found out there was a disparity in resources and access for schools, where one school had a visual art 30 minutes every other week, and another school had visual art 45 minutes twice a week.

And the school with the 30 minutes every other week had one dollar per student allocated and the other school had 64 dollars per student allocated.

The strength of the Strong Arts component may also be affected by PD offerings for arts specialists. I did not observe any regular PD offerings specifically geared toward the arts during the school year, and there were few sessions offered at the Summer Institute, as discussed below. It would seem that, regardless of budget and scheduling constraints in individual HOT Schools, the arts specialists might optimize their time with students if they received consistent, discipline-specific PD as well as the customary offerings for all teachers.

Arts Integration. The second core component, Arts Integration, was defined by HOT Schools as an inter-disciplinary approach to teaching, whereby “sequential arts learning experiences weave ideas or concepts between and among arts and non-arts disciplines, effectively advancing knowledge and/or skills in an arts discipline while concurrently advancing knowledge and/or skills in other disciplines” (Senich et al., 2007, p. 14). HOT Schools asserted that AI increased learning in all subject areas, allowed students to make connections, and offered multiple vantage points for accessing and demonstrating, or communicating, knowledge. The HOT program stressed partnerships in AI planning and delivery, and reached out to parents, community artists, community arts organizations and all stakeholders in the school community. The AI PD was likewise

designed for all stakeholders: arts specialist teachers, classroom teachers, administrators, parents, and teaching artists. Data revealed how AI fostered collegiality and community through partnering among teachers of all grade levels and subject areas, including teaching artists. Arts study and AI both foster community, as arts and AI activities bring students together to share ideas through discussion and active learning (Gallas, 1994; Hetland et al., 2013; Stevenson & Deasy, 2005).

Democratic Practice. The third component, Democratic Practice, involved the fostering of student leadership, confidence, decision-making skills, and encouraged full participation in arts integrated activities. This component was seen by many program participants as a central force in the success of the HOT program because it offered a platform for student choice and allowed the student voice to be heard in the classroom as well as other aspects of school life. For example, representatives from every grade level participated in the Student Senate. The Senate made decisions about literary and artistic displays in the schools (as described in detail in Chapter Five), and offered input toward how the school operated each day.

Democratic Practice was a central force in the fulfillment of HOT Schools' mission statement: "Higher Order Thinking (HOT) Schools inspire life-long learning in, about and through the arts in a democratic community celebrating each child's voice" (Senich et al., 2007, p. 1). This core component of the HOT approach is aligned with Dewey's belief that "...democracy and education must be an integral part of a child's early school life, and schools should be an extension of civil society" (Senich et al., 2007, p. 16). Data in this study demonstrate the power of art in building community. For

example, the theme of community emerged as a meaningful aspect of HOT Schools whereby teachers functioned within an extended community, or network, of HOT Schools educators. A related theme to community was the collegiality that resulted from shared, experiential PD and collaborative planning. The theme of community was also related to democratic practice for students and was visible in the actions of the Student Senate undertaken to benefit all students, as exemplified in the creation of the Buddy Bench at the John Lyman School, described and pictured below under the HOT Strategy of Student Senate. This theme of Democratic Practice is aligned with Stevenson and Deasy who found that democratic communities “help students meet their needs today as well as becoming tomorrow’s caring and active citizens” (Stevenson & Deasy, 2005, p. 92).

One of the strengths of HOT PD was that it created a strong sense of community through meaningful experiences shared by teachers as they learned new classroom strategies from the vantage point of their students, and through participation in the supportive network of HOT Schools educators. The PD was holistic in its approach, with an aim to educate the whole child and extended beyond arts integration strategies to include the practice of democratic ideals in the classroom. In this manner the HOT PD followed the ideals of Dewey in creating a microcosm of democratic society in the schools.

Amy Goldbas mentioned another important aspect of Democratic Practice that was a focus of PD in connection to project-based learning. She explained that:

...student voice, choice, participation, and responsibility has been critical in

getting the idea across that it's really about project-based learning. It's about cultivating student voice and students' ability to collaborate and cooperate and work together and have an opinion and defend it.

HOT Schools goals and objectives. According to Bonnie Koba, the specific objectives of the program were to increase student achievement in the following six areas: reading and language development, mathematics skills, thinking skills, social skills, motivation to learn and to achieve, and to create a positive learning environment. Teachers expressed how the HOT program engendered a learning environment where “students are motivated and engaged in deep learning of all subject matter, higher order thinking, creativity, and teamwork” (Koba, 2015a, p. 1). These aspects of an arts-infused learning environment have been documented in other studies of arts integration programs such as the Chicago Arts Partnership, or CAPE (Burnaford et al., 2009), and the Socios Unidos para Artes Via Educacion, or SUAVE (Goldberg, 1997).

There was evidence that objectives of the HOT Schools program were met in relation to students' academic achievement. For example, teachers and HOT Schools staff reported that students in HOT Schools improved academic performance. An evaluation of HOT schools by Columbia Arts Research showed that HOT Schools students outperformed their non-HOTS counterparts in writing skills, with a slight improvement in mathematics. Other studies have demonstrated how AI instruction contributed to increased achievement in reading, language and mathematics skills, and fostered student growth in social skills and motivation to learn (Miller, 2011; Snyder et al., 2014; Venzen, 2011). Another study revealed how AI instruction contributed to an

increase in overall test scores over a period of five years at a school with an arts-integrated CAPE partnership program in kindergarten through the eighth grade (Burnaford et al., 2009). Over the course of its 22-year history, the HOT Schools program continued to evolve and strengthen to help students improve academically. According to the program evaluator, “On a peer-to-peer schools comparison, most HOT schools demonstrate between 5%–10% more students at or above State Goal” (Stevens, 2016c, p. 11).

The Stevens study of HOT Schools student achievement in reaching state goals as compared with their peers in non-HOT schools pointed toward the effectiveness of arts integration in improving academic performance. It also pointed toward the effectiveness of the HOT AI PD program that had evolved over the years since the inception of the program. The success of the HOT Schools students is directly related to the strengths of HOT PD, which was evaluated by program leadership and subsequently was informed by teacher feedback on which aspects of PD worked well in their classrooms, and which areas needed improvement. The regular communication between members of the HOT community helped create a PD program that was not stagnant but continued to grow and change over time, according to its effectiveness as seen through the eyes of the teachers who participated.

Research Question #2. How is arts integration professional development carried out using the HOT Schools approach?

The HOT Schools approach to PD is comprehensive, and based on current research and best teaching practices. The PD is carried out with the combined expertise

of experienced arts specialist and classroom teachers, teaching artists, and is designed and overseen by the HOT Schools program staff. The HOT School PD activities “are experiential and collaborative” and “emphasize dialogue, reflection, evaluation, and assessment.” The design of the ongoing PD is continually evolving, influenced by feedback “from principals, staff and parents about their personal growth and student progress” (Senich et al., 2007, p. 14).

Organizational structures. One of the central requirements for developing arts-integrated curricula is collaborative planning across the disciplines. The HOT program promotes creative scheduling to allow teachers to work collaboratively within the school day. Principals and other administrators receive HOT PD for effective leadership to develop and sustain arts-infused learning environments. The HOT staff recognizes that each school has unique characteristics and needs, and scheduling is an aspect of the HOT program that reflects this, and varies from school to school.

The structures for the various forms of PD also vary in length and scope. The most comprehensive is the weeklong residential Summer Institute, followed by mini-institutes, which are weekend residential gatherings of two to three days, one-day workshops, and Convenings, which are meetings that take place in each school several times per year. These meetings are described in detail below. Each structure allows for PD related to specific program goals also described below. The HOT PD process is sustainable through these consistent, ongoing, yet flexible offerings for schools and teachers to choose from throughout the school year.

Forms of professional development. There are various forms of PD available to teachers, administrators, and other members of the educational community that are offered throughout the school year and designed to meet teachers' needs on many levels. HOT Schools PD also includes administrators as well as teaching artists and parents, so that every stakeholder in the educational community is included in the HOT process which supports the development of and sustains an arts-integration learning environment. The Connecticut Commission on Culture and Tourism describes this holistic approach as comprehensive, as it "considers the whole child, teacher, artist, administrator and school community. Professional development supports teacher growth and parental involvement, and leads to personal renewal" (Senich et al., 2007, p. 4).

The Commission also indicates the presence of professional teaching artists as a distinctive feature of the HOT approach. Classroom teachers emphasized this aspect of HOT PD as the most important opportunity for the development of artistic skills and a knowledge base from which to create integrated curricula. Teachers reported increased confidence in utilizing the arts as a result of teaching artist residencies, but a few teachers also expressed reservations about their artistic abilities, despite their participation in HOT PD. Regardless of the different levels of artistic background, preparation or confidence, all teachers agreed on the value of their experiences with teaching artists and expressed how they felt it was essential to be surrounded by "great teaching artists so that they can bring out the best of the artistic components that we can apply in the classroom." Although several teachers acknowledged professional growth as a result of working with TAs, there were still a few who expressed doubts regarding their ability to utilize the arts.

One teacher continued to voice a low opinion of her musical skills despite her positive experience working with TAs:

For me the most effective experience is when I have a teaching artist working in my classroom. I learn so much from working with that person and learning that person's skills, even in areas that I'm not comfortable with, such as songwriting. But after working with two or three of the songwriting teaching artists over a period of several years... I became comfortable with music and songwriting in my classroom with students even though I have no musical background, or talent or expertise whatsoever.

Similarly, some teachers voiced distinct preferences for one art form over another, mostly due to personal experience:

I think [it is important] to have the essentialists there if you're doing a music HOT Block and your skills are not music. Then, to have the music teacher there it is easier to implement that essential than to integrate music into your classroom. I don't have a lot of music experience. I have a lot of art experience. When I integrate, I integrate a lot of art in my classroom. It's a stretch for me to integrate music because it is not my forte. So, to have the music teacher doing that with me is almost essential.

In the example above, the teacher integrated music with the assistance of the music teacher within the HOT Blocks PD format. It appeared that visual art was integrated to a greater degree in that teacher's classroom, based on her art background. When asked about preferences, another teacher commented, "I would say either the

[visual] art or the kinesthetic. I go to the movement, you know. I like the movement part of things experience with, getting them up and moving.”

The above quotes underscore the contributions of the teaching artists in helping classroom teachers expand their skills and confidence to integrate a variety of arts in their classroom. It appeared that teachers felt most comfortable integrating visual art and movement rather than music. The data revealed perceived weaknesses in musical abilities more so than other arts, which pointed toward a need for more PD in integrating music in the classroom. This point is discussed in more detail under the heading *Teacher-Artist Collaborations* found below under HOT strategies.

The data showed three basic issues related to the implementation and sustainability of Strong Arts. First, the disparity of budget allotments and scheduling of arts classes resulted in uneven offerings for students. Second, there was ostensibly a lack of emphasis on arts-specific PD for the specialist teachers. Third, the classroom teachers’ preferences for certain art forms over others seemed to determine which art forms were most integrated. This was due to two factors: that of background experience in the arts and personal preference. HOT Schools leadership was aware of the disparities between budget and scheduling in certain schools, and took steps to help strengthen Strong Arts where needed. The issues of teacher preferences and arts backgrounds was addressed to a certain degree through collaborative efforts such as HOT Blocks, but there appeared to be no concerted effort to remedy the reluctance of many teachers to integrate music in their classrooms.

The Summer Institute. The most extensive PD event each year is the annual Summer Institute, a weeklong gathering of teachers, school administrators, teaching artists, parents, professors, authors, and guest speakers. This form of PD is also utilized by DREAM, (Developing Reading Education with Arts Methods), an outgrowth of the SUAVE program in San Marcos, California, as described in Chapter One under the heading Arts Integration and Professional Development (Saraniero & Goldberg, 2011) The Summer Institute is considered the hallmark of HOT Schools PD, as it provides a multi-faceted program of workshops, sequential tracks (in-depth study of a topic in multiple sessions), lectures, meetings, and “Informances” (arts-integrated performances with commentary by the creators/performers). An example of an Informance I observed at the 2015 Summer Institute was a performance of intricately choreographed movements from Bach’s Goldberg Variations, illustrating the entrances of melodic themes and the rhythms of each variation. This “Informance” provided a unique visual and kinesthetic view of Bach’s music, and was preceded by a brief lecture explaining the project and introducing each dancer. It was an example of the integration of music and dance to create a visual effect that communicated the structure of the music. It also demonstrated the joy of dance, as the dancers appeared to delight in footwork that illustrated rapid sixteenth note passages. This atmosphere of joy permeated the weeklong event, where I observed teachers and other members of the HOT community happily immersed in learning through the arts. The Summer Institute is attended by HOT Schools educators and those of other schools from both within and outside the state of Connecticut.

Although the Summer Institute offered numerous workshops, sequential tracks,

plenary sessions and performances, I observed a distinct lack of courses designed specifically for arts specialists, with most of the week's sessions focused on helping classroom teachers integrate the arts in math, social studies, or science. The Institute's schedule for the week revealed that, of the eight sequential tracks, only one was focused on Strong Arts, which dealt with creating student arts assessments that demonstrate higher order thinking. Of the 26 single-session workshops, there was only one that focused on a specific art form, that of songwriting. This workshop was helpful for music teachers but was also geared toward helping classroom teachers utilize songwriting techniques in their classrooms. The program evaluator also observed the lack of focus on the arts and commented:

The art specialist, the arts educators who were there felt they needed to have more of a focus – so much of the Institute was based on the integrative skills for the classroom educator and not a lot was really based on the other needs of the rest of the team.

It appeared that this was an area in need of improvement for future Summer Institutes as well as other forms of ongoing PD. While the arts specialists are valued and respected in the HOT program and participate in collaborative planning in the creation of AI curriculum, there appeared to be a lack of PD focused upon their needs in understanding the specific goals of the academic subjects. As one Summer Institute presenter put it, teachers "...have to be acknowledged for their strengths and that they have different needs, that they have different gaps in the things that they might need to have deep knowledge of..."

In any comprehensive program there will be areas needing adjustment or improvement, and HOT Schools proved to be an organization that engaged in regular self-evaluation based on feedback from its members. Although there appeared a need for more sessions devoted specifically to Strong Arts, the offerings at the Summer Institute as a whole provided meaningful, hands-on AI PD experience for classroom teachers utilizing skills in music, movement and visual art.

Mini-Institutes. Another form of ongoing PD is the mini-institute, a residential two to three-day event designed to reinforce the concepts and strategies learned at the Summer Institute. Mini-institutes also provide time for experienced HOT Schools teachers to re-connect and share best practices. Special topics are addressed for in-depth study, such as the 2006 spring *Mini-Institute*, which focused on the HOT strategy of *Teacher-Artist Collaborations*, described under question 2c, below (Senich et al., 2007, p. 16).

Convenings. HOT Schools provided a large supportive network to its members who met regularly to share successes and challenges that arose in the program. For example, Convenings were regularly-scheduled meetings where teacher teams shared best practices and collegial successes, and planned integrated curricula. These meetings were crucial to the program, as the relationships formed during the Convenings provided the foundation for ongoing collaborative planning of arts-integrated curriculum. Principals met with their staff members on a regular basis, and the principals themselves met three times per year to discuss state mandates or other initiatives, and address challenges associated with sustaining arts-integrated programs.

Peer Partner Days. These were one-day sessions where arts specialists invited non-arts classroom teachers as partners with whom they attended the workshop. The morning sessions were focused on skills and concepts specific to the particular arts discipline for that day. Afternoons were spent in collaborative planning where the partners developed arts-integrated lessons or units. Peer Partner Days helped raise the awareness of the value of arts pedagogy, and at the same time showcased the instructional leadership of arts teachers. Peer Partner days were held at schools or community arts facilities. One of the aims of this form of PD was to help “reduce the isolation that arts specialists often feel (Senich et al., 2007, p. 14). Bonnie Koba explained the origins of Peer Partner Days as an outgrowth of the original Peer Days, where arts specialists met separately from classroom teachers. Bonnie Koba reported that at these meetings, the arts specialists expressed how “they felt like they were the babysitters while the other teachers did their planning and all that.”

Peer Partner Days offered music and art teachers the chance to participate and assume leadership roles in PD and curriculum planning with classroom teachers. As Koba observed, “teachers like to learn from other teachers,” and this strategy proved to be effective. It became evident in teacher interviews as well as in observations of workshops that teachers enjoyed presentations made by other teachers. One former teacher, now a teaching artist, used the following descriptors for this scenario at the Summer Institute: “great modeling, great opportunity for peer-to-peer and colleague to colleague reflection (and) collaboration.” Some teachers reported that Peer Partner Days and other collaborative PD helped relieve feelings of isolation, fostered respect for the

rigors of arts instruction, and increased collegiality among teachers of different disciplines.

Leadershops. These were one-day PD sessions led by experienced HOT teachers. As mentioned above, teachers were viewed as an effective source of expertise in HOT strategies. For example, teachers who attended the Summer Institute and implemented the new strategies were asked to share these with their colleagues. Bonnie Koba explained that the HOT directors developed Leadershops because they wanted “...teachers to be able to see and first of all feel empowered when they go out and take a risk and they have successes. We want to celebrate those successes, and we want to empower those teachers as teacher leaders.”

Coaching. HOT Schools offered the coaching program as described in Chapter Six, which employed the expertise of retired HOT Schools principals and experienced HOT Schools teachers. These coaches assisted schools in the assessment of their strengths and weaknesses in the HOT core components and in yearly planning for improvement.

PD for the Public. The HOT Schools program periodically offers PD sessions that are open to the public. These are mostly in the form of *Leadershops* or *Mini-Institutes*, and include the annual *Summer Institute*. The HOT Schools’ yearly PD schedule is published online, and indicates which sessions are open to non-HOT Schools educators. For a view of the 2016–2017 schedule, please refer to Appendix Q.

STEAM PD. The HOT program offered a one-day workshop for K–12 teachers in collaboration with the Talcott Science Center in which participants investigated the

intersections between the arts and STEM subjects. Workshops provided hands-on experiential learning in brain research and the integration of the arts and sciences, encouraging creativity and critical thinking in all subjects.

Teacher benefits. The above forms of PD appeared in the discussion of emergent themes, specifically in the section on *Teacher Benefits*. The data showed that teachers valued PD that was relevant, ongoing, hands-on and student-centered. They also responded positively to receiving PD from their peers, who understood their challenges in the classroom. They emphasized the transformation of the learning environment as the main result of arts integration and their ability to implement AI curriculum through HOT AI PD.

Student benefits. The variety of PD events described above benefited students when teachers *successfully* implemented HOT techniques in their classrooms and then shared their expertise with colleagues. This created consistency in the schools' instructional practices that offered students multi-modal avenues for learning. The Convenings and other meetings helped address any challenges that arose in delivering integrated instruction through the HOT approach. The regular communication among faculty, staff, administrators, parents, teaching artists and other stakeholders helped to ensure whole school reform for the benefit of all students. Constructive feedback also informed HOT Schools about the *strengths of PD* or areas needing improvement.

HOT strategies. The HOT program developed a variety of effective strategies that were found to help teachers deliver arts-integrated instruction. These strategies involved teachers, teaching artists, and the entire school community in differing roles to

foster higher order thinking and to provide a platform for the student voice. HOT strategies had been tested over time and were proven to be effective in reaching a diverse student population. The strategies provided structures to help facilitate the implementation, reinforcement, and enhancement of the HOT approach.

Teacher-Artist Collaborations (TACs). These were HOT PD strategies that played a significant role in delivering quality arts-integrated units, each reflecting a synthesis of the HOT Schools Core Components of Strong Arts, Arts-Integration, and Democratic Practice. The TACs were 10 to 20-day residential collaborations between professional teaching artists and experienced classroom teachers. These teams worked together to create authentic, sequential arts-integrated learning experiences where students applied higher order thinking skills of imagining, decisions-making, creating, performing, and responding.

The HOT Schools Teaching Artist residency program was a key feature in the development of artistic skills for non-arts teachers. Those with little or no arts backgrounds reported increased confidence in their abilities to integrate the arts in their classroom. The increase of these skills helped to ensure a more sophisticated level of arts-integrated instruction on the cognitive level rather than the arts playing a subservient role to the academic subjects. According to Bresler's (1995) delineation of AI styles, the subservient level is the least effective; for instance, with music it could be little more than singing a song from a historical period or culture in a social studies unit. The cognitive level of AI would employ music as a form of inquiry to enhance deeper learning, such as studying the concepts of shape or form through music and then comparing it to how

shapes are used in visual art or architecture; alternatively, students could examine how the music of a particular historical period reflected the socio-political, cultural or aesthetic values of the day. This style of integration might also help students make connections to other subjects and creates possibilities for deeper learning or previously unexpected discoveries.

Amy Goldbas, Associate Director for Program Design, stated that risk-taking was an important element in arts teaching and learning, and that “The Teaching Artists are the critical partners who cultivate creative courage during their collaborations with classroom teachers to help bring curriculum to life and provide students with authentic arts experiences” (Goldbas, 2016, p. 8). Teachers related positive experiences in partnering with TAs; this became one of the emergent themes that surfaced often in interviews. Teachers reported increased understandings of artistic concepts and skills, which translated into a higher level of AI in their classrooms. Other AI programs utilized TAs to help teachers develop artistic skills, and reported how these partnerships could have long-term effects: “Through these experiences teachers could develop skills in the arts that enabled them to engage students in understanding and demonstrating substantive connections between the art form and another subject, even when the teaching artist or specialist was not with them” (Stevenson & Deasy, 2005, p. 84). Another study described the greatest benefits of teacher-artist collaboration PD as “when learning occurred not only for the teacher (the main beneficiary of the professional development) but rather for all participants: teacher, artist, and students” and that “the results of the teacher learning are tangible because they are measured against student learning”

(Goldberg, 2004, p. 17).

I observed that the HOT Schools Teaching Artist residencies were structured to include the classroom teachers but not the arts specialists. Louise Stevens, program evaluator, noted in particular that, “when the artist in residence is brought in, the partnership rarely is structured to include the music educator within the school.” The program evaluator commented further that classroom teachers appeared to work more easily with visual art than with music. It appeared that additional PD was needed in order for classroom teachers to become aware of the many facets of music beyond songwriting or playing instruments. Stevens mentioned how classroom teachers needed to understand the full value of music in integration: “We give so little attention to the history of music, the linkages, as you’re saying, with any subject, how music illuminates the story of history - is rarely thought about and/or the stories of current events for that matter.”

Some teachers appeared to have anxiety about their performance skills in music. This was evidenced in their narratives where they mentioned music as the art form for which they felt the least prepared to integrate effectively in their classrooms. It appeared that this uneasiness was a result of viewing music solely as a performance art rather than an epistemology, a way of knowing, or a lens through which other subjects may be viewed. It is possible that if teachers were better informed in making musical connections to the curriculum from the vantage points of history or culture, they might become more comfortable with the integration of music in their classrooms. This is an aspect of HOT AI PD that could be expanded in order to help teachers understand how the process of music rather than the product could allow for a higher level of integration.

This emphasis on process rather than product, a core value of the HOT program, could be applied in this way to open new avenues of music integration for teachers.

The focus on musical performance skills implies an emphasis on the subservient AI style defined by Bresler (1995), whereas AI on the cognitive level might involve studying form and structure in music and how these concepts are present in poetry or architecture. I observed teacher perceptions of music as being more challenging or problematic in AI than visual art or movement/dance. The anxiety expressed by teachers about integrating music in their classrooms was invariably related to the external values of music, i.e. the development of performance technique (Smith, 2014) as opposed to a more introspective approach toward music as an epistemology, or lens, through which other subjects may be viewed. The latter approach would be in keeping with Bresler's (1995) cognitive level of AI as described above, and might possibly help alleviate the concerns of teachers for whom musical performance, whether singing or playing an instrument, is a challenge.

The wider application of music integration in the classroom is within the grasp of all teachers, and holds the potential for deep learning. Teachers' perceptions of music as a challenging subject suggest the need for additional HOT strategies to integrate music on the cognitive level, rather than exclusively through performance. Louise Pascale (2004) encourages teachers to think of music in a broader sense; that music can take many forms other than performance. She advises teachers to help their students explore sounds by developing listening skills, and engaging in active listening by moving to the sounds they hear. This activity can then be connected to other subjects such as language arts, for

instance, where students write a narrative piece describing the sounds in their environment (2004, p. 68). If performance is used as part of a lesson, Pascale emphasizes group participation rather than working on reading and sight-singing skills, for example. In her words, the goal should be to “create a safe environment for participation” and this includes the teacher as well as the students (2004, pp. 64–65).

Town Meetings. Town Meeting is a weekly gathering of the entire school with the dual purpose of showcasing student achievement and building community. Students had the opportunity to present projects or learning-in progress to the larger school community, including parents and board of education members. These presentations fostered student self-confidence and the ability to present ideas in creative, artistic ways. Teachers spoke highly of the weekly gatherings in their schools, and described how their students enjoyed being involved in the presentations.

Town Meeting was reportedly an effective tool for special needs students, who communicated effectively through the arts and thereby celebrated their accomplishments without drawing attention to their particular challenges. A special education teacher described how well his students were able to exhibit leadership at Town Meeting:

[When] we’re doing a math test, or reading a story, or memorizing facts for social studies, it’s difficult, it’s very challenging. But when we’re getting up and dancing and acting, it’s very different; they’re leaders. And at this Friday forum they’re the stars of the show: they’re the ones reading the poem, they’re the ones telling the story, they’re the ones dancing on stage, and you can’t tell that they need help or that they have special needs.

The Town Meetings are an important venue for demonstrating arts-integrated learning, and as described in the above quote, all students are included in this public event, including those with special needs. Performances may or may not be polished, but the point is that they are taking leadership roles in the presentations. This shows how the HOT PD focus on process rather than product is put into action in a whole-school event.

Enhanced Curricular HOT Opportunities, or ECHOS. Principals provided teachers with regularly scheduled blocks of time over a six-week period, designated for whole school integrated activities. For example, one of the projects took place during an 18-day TA residency where teachers and TAs collaboratively designed an arts-integrated science unit where 5th grade students studied life in ancient Egypt. Students created and tested their own hypotheses as they studied the reflection and refraction of light using shadow puppetry. They wrote scripts and painted murals to dramatize daily life in ancient Egypt. Renzulli's model provided a platform where "Through the creative process, they synthesized ideas; became producers, researchers, and designers, and actively engaged in their learning" (Senich et al., 2007, p. 9). The subjects of the special learning activities were driven by student interest, were connected to the curriculum, and were developed into lessons or units by the teachers. The focus of ECHOS was toward real world learning experiences in which students applied higher order thinking skills such as problem-solving and creative ideas to self-selected areas of study. This strategy was based on Joseph Renzulli's approach to whole-school change through school-wide enrichment (Senich et al., 2007). His "Enrichment Triad" encompasses a range of experience for students, and emphasize that students "should become producers of

knowledge rather than consumers, actively formulating a problem, designing research, and selecting appropriate audiences for their final product” (Senich et al., 2007, p. 9). The school-wide enrichment projects, or ECHOS, were connected to HOT PD as they took place during teacher-artist collaborative residencies. Teachers of various subject areas collaborated and were guided by the TAs who helped teachers as well as students make connections to the arts in designing the projects.

HOT Blocks. Blocks of time were scheduled during the school day for cross-curricular planning among teachers of multiple grade levels and arts essentialists. This strategy supported students in Scientific Research Based Interventions (SRBI) for students with academic challenges. The objectives of the collaborative planning were to create curricula to facilitate learning in language arts and math content through the arts. HOT Blocks has been a successful strategy that has improved student motivation and achievement while fostering collegiality among teachers.

Student Senate. The HOT core component of Democratic Practice was visible in the Student Senate, where representatives at all grade levels developed leadership skills and made decisions about activities and daily life at their school. This strategy was based on John Dewey’s view that a school should prepare children to function responsibly in society, and in order to do so, the school must function as a microcosm of the larger society. In Dewey’s words:

[When] the school introduces and trains each child of society into membership within such a little community, saturating him with the spirit of service, and providing him with the instruments of effective self-direction, we shall have the

deepest and best guarantee of a larger society which is worthy, lovely, and harmonious (1915, p. 34).

The HOT strategy of the Student Senate exemplifies Dewey's approach of preparing students to function in the larger democratic society beyond their school years. Each HOT school determined the process by which students became senators whether by election, rotation, or other means. According to HOT program leadership as well as the program evaluator, Democratic Practice was a crucial component in delivering effective AI curricula, as it fostered self-confidence among students and encouraged them to take risks associate with AI activities. This theme emerged in teacher narratives that expressed appreciation for how Democratic Practice in conjunction with AI helped transform teaching practice by changing classroom climate.

A study by Stevenson and Deasy (2005) found that AI contributed to the building of democratic communities in several ways. In an AI program where the arts are respected by teachers and administrators as legitimate expressions of:

...student knowledge, insights and experiences, (then) learning begins to matter and a third space is created. Within this space, as we have seen, teachers and artists assist students to make connections between art works they are studying...and their daily lives (2005).

Not only were discipline issues and absenteeism reduced, but students learned how to act as responsible citizens within a learning community and care for their peers by exercising their responsibilities in the Student Senate. For example, the Student Senate at John Lyman School made the decision to create the Buddy Bench at John Lyman School.

A student had written a note to the Senate, describing how they sometimes felt left out and lonely at recess. The Senators brainstormed how to help students who felt this way, and came up with the solution of putting a special bench on the playground where students could sit to indicate they needed a buddy. Senators described the purpose of the bench: “Kids that feel lonely and need someone to play with can sit on the bench. A buddy will come and ask them to play” (Senators, , p. 10).

The Senate had invited all students in every classroom to submit ideas for the design of the bench, and a parent who was also an artist, helped compile the different ideas into a coherent design. The result of the combined efforts was a colorful summer scene, created with the fingerprints of every member of the John Lyman community: students, teachers, support staff, and administrators. As Senators explained, “Each print was a pledge to say that they will be a good buddy. It honors the agreement to never bully and to not leave others out when you are playing a game” (Senators, 2016, p. 10). The decision to create the Buddy Bench reflected genuine caring about the school community. It showed how the HOT program fostered the kind of thoughtful leadership skills students could carry with them as future citizens beyond the school setting. See Figure 6 for a picture of the Student Senators and their newly installed Buddy Bench.



John Lyman Elementary students and teachers debut the Buddy Bench.

Figure 6. John Lyman Elementary students and teachers with the Buddy Bench

Student Literary and Art Boards. Among the key strategies of the HOT program were the peer-review boards that helped foster leadership skills and allow the student voice to be heard. The literary and art boards offered students the opportunity to review, evaluate and recommend submissions from the Magic Mailbox, described below, for display or performance by student theater groups or other presentations at the weekly Town Meetings. As with the Student Senate, the application process for serving on peer-review boards varied from school to school.

Magic Mailbox. This was originally a repository for student writing, but expanded to include art work, songwriting, musical composition, and other creative work. The process for submission and the selection of work for display or performance was decided by members of the Student Senate and the Literary and Art Boards. At John Lyman School, our student guide proudly showed us their Magic Mailbox, capped with a giant Lion head, located at the entrance to the library. Students submitted their work by

slipping it inside the Lion's mouth. The Magic Mailbox supported literacy and creativity and also provided students the opportunity to evaluate and make thoughtful decisions about creative work. Individual HOT Schools designed their own Magic Mailboxes, each reflecting the unique community it served, with creative and thoughtful features, such as the examples pictured in Figure 7, first from the left, the Lyman Lion mailbox photographed by the researcher, in the middle a decorated traditional mailbox, and on the right, another with slots positioned for students at incremental heights, including a larger slot for artwork, both reprinted with permission, from the HOT Schools website (2013).



Figure 7. Magic Mailboxes from three HOT Schools

The Student Senate, Art and Literary Boards, and the Magic Mailbox strategies were related to the theme of student growth in terms of leadership and socialization skills, and were also related to Howard Gardner's Theory of Multiple Intelligences (1983), particularly with regard to interpersonal intelligence. Students were given the responsibility to work as a team in making decisions that would affect individual students

as well as the entire school community. Members of the student boards worked cooperatively to evaluate creative writing and works of art. They made artistic decisions about how to showcase the creative works, and they made practical and sensitive decisions about aspects of daily school life. This included solving problems that might occur during recess times, such as the implementation of the Buddy Bench system of providing playmates for lonely students.

The HOT strategies described above were tested and proven over time in established HOT Schools. Although not all HOT Schools implement every strategy to the same degree, teachers expressed satisfaction with the strategies they utilized in the classroom and in whole school activities. These data relate to the theme of *teacher benefits* with blocks of time for collaborative planning, which led to reaching all students, and ultimately transforming the classroom environment through greater student engagement.

Teachers expressed appreciation for HOT Blocks and other opportunities to meet and plan with their colleagues across the disciplines. Adequate planning time was regarded as a necessity in fulfilling the ideals of the HOT program, and was also emphasized as an important issue when this was found to be lacking. According to Anne Bloomfield, in her study on teaching integrated arts at the primary level, efficient planning that is clearly documented is a necessity for effective AI instruction, and should show “the main teaching aims and learning objectives in a succinct but meaningful manner and allowing for professional interpretation based on the teacher’s understanding of the children’s needs.” (2002, p. 14). Bloomfield then delineated four stages of

planning; identification of a theme, preparation for a cycle or unit of study, individual lesson plans, and the recording of progress as data for the next cycle (2002). In my investigation of the HOT School program, I did not see any evidence of planning that was organized or documented for teachers in this manner. Given the range of implementation of the HOT program among its members, it is possible that certain HOT schools had determined specific stages of planning and stated goals to greater and lesser degrees. According to the data analysis in this study, it appeared that the HOT Schools program was more focused on broader goals for all students and that each individual HOT school met those goals according to its own degree of implementation. For example, the John Lyman School Orientation Day literature listed broad goals aligned with state standards and those of the HOT program in general, as follows:

In the Integrated Day Program, teachers plan instruction to ensure that children will:

- use their own experiences to actively construct new knowledge which connects to and extends what they can already understand and do.
- identify a problem and generate a variety of solutions.
- learn in a variety of artistic and creative ways.
- work both independently and cooperatively to accomplish goals.
- develop into flexible thinkers, able to adapt to a rapidly changing world
- become effective communicators
- develop an awareness of the inter-connectedness of all things.
- learn responsibility and respect for themselves, their environment, and

other people.

- develop a sense of competence in their ability to positively affect the world around them.
- develop academic skills which will prepare them for life in the 21st century.(2015, p. 4)

The HOT strategies were also related to the theme of *Student Benefits* through self-directed learning, project-based learning, the development of leadership skills and the skills listed above. HOT PD prepared teachers to implement strategies for these initiatives, as described above under Democratic Practice. Both self-directed learning and project-based learning are integral to an effective AI program, in which the arts play a central role in helping students become independent thinkers and problem-solvers, and they are also linked to the building of community. For example, Burnaford, Aprill and Weiss (2009) observed how the collaborative nature of project-based learning had long-term benefits for students, especially in conjunction with AI:

They see the inevitable links between what they are learning in school and what the community and the world have to contribute to that learning. What's more, they see what *they have to contribute back to that community and that world.*

Students must solve problems and use strategies that they learn to work with others. The process of conceiving, designing, and following through on a plan of action becomes critical to students' success. As Eve Ewing, a seventh grader at Hawthorne School, put it, "Art changes people's minds." Action and reflection are both indicators of thoughtful integration. Art can, indeed, change people's

minds...about social issues, about solving problems, and about how school children can be active agents in their communities (2009, p. 8).

HOT PD Strategies. Teachers sought PD that was relevant to their teaching assignment and the HOT program allowed them to choose workshops. The Summer Institute offered a variety of daily workshop choices, plus multi-session sequential tracks for more in-depth study of a particular topic or strategy, such as “Multiple Intelligences-Multiple Solutions” or “Strong Arts: Both Hands On AND Minds On” (Koba, 2015b). Teachers appreciated that they were not forced to sit through meetings that did not offer any applicable strategies or best practices for their teaching. I observed that a lack of choice in PD was particularly true of arts specialists in the public schools. A math teacher had also observed this scenario and noted the importance of choice in PD:

Choice is a really big deal for me personally and the staff at my school. As a music teacher you probably had to sit through standardized test meetings that you have no business being a part of... And I think it’s an inappropriate use of resources; the taxpayers are footing the bill for this and you’re sitting in a workshop that has nothing to do with your professional bearing. Choice is really important.

Another theme that surfaced in teacher interviews was the appreciation for PD that was ongoing throughout the school year, such as mini-workshops, Leadershops, and HOT Blocks, where concepts from the Summer Institute could be reinforced by those who attended or newly presented for those who were unable to attend. If teachers had questions or problems that arose during the school year, there was a supportive network

of HOT teachers available to help. One teacher described how a group of teachers used social media to remain in continual communication during the year, which helped their collaborative efforts:

Even though we don't have time in our day, we'll call each other, we'll text each other. We have a Facebook group, when there's an idea there at three in the morning that we'll pop it [in] and there it goes; so it all just seems to be there. There's a group message in all hours of the night, so if we're on vacation, holidays – whatever - when an idea pops into your head, it pops up there and you can go back later and you can read the brilliant ideas that people come up with that won't just help them, they will help everyone.

The supportive network described above was previously described in the discussion of the sub-theme *teachers teaching teachers*. I observed that this was a well-received strategy, as there appeared to be an unspoken understanding between teachers that they had common experiences and challenges in the classroom. When teachers showed other teachers how the HOT strategies worked for them, it gave a realistic picture of how to effectively implement strategies and envision the learning potential in the classroom.

Many of the presenters at the Summer Institute were teachers who shared their range of AI experience with workshop participants. Teachers enjoyed watching their colleagues in action, and this was sometimes implemented at their own schools. For example, a teacher who was a co-presenter on HOT Blocks strategies emphasized the value of peer observation in learning about co-teaching: “Another big part of learning

how to work with HOT Blocks would be to see one in action, watching the co-teaching occur in the classroom.” The co-presenter concurred: “I think to get a handle on what it truly is, you can’t experience it in a [class] room like this; you really need to see it in action.”

The use of professional teaching artists (TAs) was another key strategy that emerged from the teacher narratives. Teachers spoke enthusiastically of their experiences during the TA residencies in their schools. For example, teachers frequently made comments such as, “The most effective experience is when I have a teaching artist working in my classroom,” and that the TAs “bring a level of expertise and comfort” by providing a high level of artistic skills to classrooms to integrate on a higher level than teachers could do if they did not have a strong arts background. In order to derive optimal benefits from the TA residencies, both the TAs and the classroom teachers received the appropriate PD. For example, the TAs needed to understand school culture and teachers were instructed on what their collaborative roles would be. This two-sided PD process developed during the early years of the program when, according to Bonnie Koba, the TAs did not understand how a school functioned and when they were in the classroom working with students, the teachers had a tendency to disengage and “sit in the back of the room, grading papers.” In other words, the teachers did not understand that there was to be equal collaboration with the TAs, and the TAs often did not understand how the classroom functioned. I did not observe this scenario, but instead witnessed teachers form active partnerships with TAs to provide meaningful, integrated project-based learning for students.

Another strategy that came up less frequently was the emphasis on process rather than product. This was verbalized more often by HOT Schools leadership than by teachers, although I observed it practiced by teachers in the classes I observed, and it was acknowledged as a strategy that relieved the pressures of polished performances. A teacher described this strategy when her class acted out a short story they had read:

We did it in a couple of days and presented it to the whole school. The costumes were minimal, maybe next year I'll add more to the costumes. It was not the product - it was the process...I've carried that with me and that really resonates with HOT schools, it's the process; not necessarily that it looks pretty or sounds perfect.

The emphasis on process extended to the program's development at each HOT school. As mentioned previously, Amy Goldbas emphasized how schools who had joined the program were working from various levels, with different resources and priorities, toward fully implemented programs, and that "a HOT School is a process of becoming...and it's a process that changes continually...with leadership changes and faculty changes, and all of the things that happen because we're working in public schools and this is what happens."

The emphasis on process rather than product was emphasized by the HOT program leadership as it worked to help schools improve and maintain the program despite the unavoidable circumstances that arise in public schools, as described above. The development of a fully integrated whole-school program could be a long process, with changes in leadership or other fluctuations inherent in public schools, but the HOT

leadership continued to work around the issues that arose in order to keep the HOT momentum going in the schools committed to the program.

Research Question #3. What are teachers' experiences in the established HOT School environment?

Positive Experiences. Teachers reported their experiences in the established HOT School environment as positive and energizing, with ongoing reinforcement from several sources. First, collegial planning and support through the HOT program was emphasized as an essential ingredient in the successful creation and delivery of arts integrated instruction. For example, the teamwork required to create integrated curricula across the disciplines increased collegiality between all teachers, and especially fostered respect for arts specialists, who expressed that this could be lacking in traditional schools.

Arts specialists expressed how they felt less isolated and more at the center of school activities. Rather than regarded as non-essential, with their classes providing prep time for classroom teachers, the arts teachers in HOT Schools assumed leadership positions in presenting workshops and assisting classroom teachers in developing artistic skills and knowledge. Another study (Stevenson & Deasy, 2005) similarly showed how arts teachers felt more valued as they moved from the peripheries of school curriculums to playing significant roles in arts integration programs.

Another source of support reported by teachers in established HOT Schools was the ongoing HOT PD throughout the school year that offered continual growth in AI skills and corroboration with teachers from other HOT Schools. Teachers expressed how the ongoing PD helped reinforce what they learned at the Summer Institute. Support was

always available through the HOT Schools network, which reached beyond the individual schools to the HOT program staff and teacher teams from other HOT Schools. The choices, variety, and availability of ongoing HOT PD proved to be comprehensive, and teachers' comments suggested that they felt their needs were being met throughout the school year.

Teachers appreciated that administrators in HOT schools recognized the value of an arts-infused learning environment. Principals attended PD that prepared them to assist teachers with appropriate scheduling to allow for collaborative planning, and to support the ongoing PD in their schools. Regular faculty meetings allowed time for sharing and brainstorming ideas and solutions for any problems or new initiatives that arose.

Support was also available through a coaching program developed three years before the time of this study to look at HOT Schools in which there were areas in need of strengthening. The coaches were retired HOT Schools principals or experienced HOT Schools teachers who observed classes or other activities and assessed them by means of a rubric. They met with teachers and administrators, and spoke with students. The coaches then looked at the school's annual plan and year-end report, which every HOT School prepared. Bonnie Koba explained how the goal was to have the coaches "help look at where the school is, what the school looks like in terms of Strong Arts, Arts Integration, and Democratic Practice and talk to them about where they would like to focus on advancing." The coaches listened to teachers to determine their concerns and needs, and made recommendations for related PD.

Issues. The issues that affected teachers' abilities to carry out the HOT program in the schools were administrative support and scheduling or time. The school environment was that of cooperation and teamwork among teachers, but the lack of PD or planning time created stress and inhibited the collaborative efforts among faculty. If administrators did not create adequate planning time, teachers were left on their own to meet and plan outside regular school hours, as described below. Certain teachers reported that they had time during the day for planning, but others reported that some of their HOT planning time had fallen away due to increased focus on testing and other district concerns. Teachers described this scenario but also emphasized how they compensated for the lack of time during the school day. For example,

It is very stressful but even with that and the collaboration time is diminished, it doesn't seem that way here. Even though we lost more time which we used to have – we used to have two or three blocks a month to really talk about this and make HOT Schools a success in our school – that time is gone now. It's time to look at data, look at charts, look at graphs, look at numbers for tests. But people now do it after school, before school, at lunch. I have a colleague now we meet at lunch and we talk about what we're doing this week for HOTS and how we can make it better for everyone. And we have a journal that we pass around the school and there are good ideas and it and it sits in our staff room so people can look at it. It's a program that works.

These efforts made by teachers to communicate with each other despite the lack of common planning time illustrates the strong sense of community present in HOT

schools. The communication helped maintain the supportive PD network and helped preserve the strengths of the program.

Effects on teaching practice and the learning environment. Teachers reported that HOT PD had transformed the learning environment of their classrooms as it provided gateways, or entry points for a variety of learning styles. The understanding of multiple intelligences and the multi-modal ways of presenting material to students allowed them to grasp concepts that otherwise might have been challenging to them. Howard Gardner's Theory of Multiple intelligences (1983) played a central role in delivering AI curricula effectively to students. The classes I observed at John Lyman School and the PD workshops at the Summer Institute often incorporated several intelligences within one lesson. For example, a fourth grade language arts class utilized visual/spatial intelligence with lists, charts and pictures; musical intelligence in creating musical themes for characters in a story; kinesthetic intelligence for creating movements to help tell the story; and verbal/linguistic intelligence in reading and identifying key vocabulary words in the story.

Teachers also stressed how the HOT program allowed students to get out of their seats and learn through movement and work with their peers in project-based learning. Students at HOT Schools do not sit at their desks all day, but rather are active participants in their learning, and through Democratic Practice have a say in what and how they will learn. Teachers frequently described how students were actively engaged in learning and enjoyed being in school to the point where they did not want to miss a single day. This was also found to be the case in other studies; for example, Stevenson and Deasy (2005)

reported that, as a result of AI program implementation, attendance rates were up and discipline referrals were down. Another recent study is aligned with these findings, in which the Bates Middle School in the Arundel County Public Schools, Maryland, reported improved attendance and a 77% decline in discipline referrals as a result of a three-year implementation of an arts integrated program (Snyder et al., 2014). Principals in the above studies commented on how students appeared to be happy and that absenteeism was low for both students and teachers. According to the HOT program evaluator, this was a frequent remark made by principals of HOT schools when asked how the program had affected their schools.

A parent described how her daughter had started Kindergarten with adjustment issues and educational challenges associated with ADHD. She commented on how the HOT School addressed the problems "...beautifully in a very non-threatening way for my daughter. She does not think that she is different." The parent then related this story:

She loves school. When we have Family Share Nights ... my daughter loves them, she can't wait for them to come, she can't wait for us to go. Last year when we went to one of them ... the principal was on the announcements, saying "It's over, it's time to go." My daughter had a meltdown, crying; she did not want to leave school ... she would never leave if that was an option for her. She loves school. My son is entering Kindergarten and she tells him every day how much he is going to love it and all the things they're going to get to do.

According to Amy Goldbas, principals often remarked on the positive effects of HOT Schools on school climate, that "they can see the impact on how teachers are

teaching students in class, student attendance and a general tenor in the building and that that's really critical to them for what their school community and school culture is like." Previous studies concur that arts-infused learning environment has a positive impact upon school culture (Burnaford et al., 2009; Hetland et al., 2013; Snyder et al., 2014; Stevenson & Deasy, 2005).

Collegiality and community. One of the key positive outcomes of HOT PD was the enhancement of relationships between teachers, students, parents, and other members of the school community. The team-oriented, experiential activities of HOT PD helped to foster collegiality and the growth of community. HOT PD is all-inclusive, whereby every stakeholder of the educational community participates in ongoing activities and workshops, whether the *Summer Institute*, *Mini-Institutes*, *Leadershops*, *Convenings*, *HOT Blocks*, *ECHOS*, *TACs*, or other PD. Teachers, Teaching Artists, Administrators, and Parents alike receive PD that helps create a supportive environment for learning through the arts. Teacher narratives revealed that the nature of arts integration is such that it both requires and develops community and this extends beyond individual schools to include all HOT Schools. As Amy Goldbas observed, "...what HOT Schools is, is a PD opportunity that becomes a network of schools, a supportive network of schools."

The sense of community was also described by teachers as a feeling of family. One teacher said this about his experience returning to the Summer Institute:

I saw them all last summer and I went away for a year, I came back and I felt like I saw them yesterday and it was like we haven't missed a beat because you're like a family. Like they say, from the very first day you are here, you feel you really

are a family with these people.

A parent commented on how this sense of community helped her daughter develop confidence at school, and offered the following perspective on how a student might benefit from a supportive, family-like community:

Yes, community building is huge there and my daughter, who at the beginning had a rough kindergarten year and first grade - she's not a risk taker - ... as the year went on she became better at taking those risks and more comfortable and I think it's the whole process of the students understanding that it is a safe place.

Relationships between teachers and administrators were reportedly changed by HOT AI PD. Several teachers commented on how they felt understood and supported by their principals and that they found themselves in dialogue about deep learning through the arts rather than just the typical everyday business of running a school. They felt they were part of a team with shared goals that were more about quality learning experiences for students rather than maximizing standardized test scores. The sense of community and belonging within the HOT program was emphasized by teachers in their narratives and also in relation to their students feeling secure and happy within this community atmosphere, or learning climate in their classrooms.

Like in other studies, the data in this study suggests that the building of community through the HOT program may have addressed a fundamental psychological need to belong. According to Baumeister and Leary (1995) "Belongingness appears to have multiple and strong effects on emotional patterns and on cognitive processes. Lack of attachments is linked to a variety of ill effects on health, adjustment, and well-being"

(1995, p. 497). Baumeister and Leary also asserted the importance of cognition, or intelligent thought, as “the most important adaptive trait in human beings” and that “the concern with belongingness appears to be a powerful factor shaping human thought” (1995, p. 503), and this involves thinking about oneself and relationships with others. The emphasis on community as expressed by participants in HOT PD suggested that the basic psychological need to belong was met for teachers and students alike. This enhanced the supportive classroom climate, a factor that appeared to enhance learning potential by fostering teacher and student willingness to take risks in AI PD and students’ classroom activities.

Teachers described how parent participation and support increased through their participation in HOT PD. For example, certain numbers of parents of HOT Schools students may apply to attend the Summer Institute, and the expenses are covered by the individual schools. I observed several parents participating in workshops alongside teachers, and it was difficult to tell the difference between them. This was due to the level of engagement through the hands-on strategies, with participants taking on the roles of students. Parents seemed to gain a greater appreciation of teachers’ efforts in AI as well as the resultant learning processes their children’s experience in the classroom.

Previous studies have demonstrated how arts programs increased parents’ involvement at schools; there may be an initial interest in seeing their children perform or present, and the arts activities “allow for schools and parents to connect in a meaningful way, a departure point for parents to develop a greater sense of comfort and belonging at the school” (Stevenson & Deasy, 2005, p. 113). Parents also become aware of how the

arts give their children a voice, and the power of the arts in learning. As one parent in Burnaford's (2009) study observed, "When kids learn through the arts, they remember, they retain it" (p. 106).

In addition to parent involvement, collegiality between teachers of different subjects was increased through collaborative AI projects, as the typical isolation of teachers according to grade level or subject decreased. A veteran classroom teacher noted the increased collegiality beyond her grade level team through AI: "I was able to work more closely with teachers that I might not have otherwise worked closely with, namely the art teacher, the music teacher." Another study similarly demonstrated the nature of the arts as a unifying force at a school and how collegiality increased through ongoing teamwork among teachers in creating integrated curricula (Stevenson & Deasy, 2005).

Overall teacher experience in the HOT Schools AI PD program. Teachers described HOT AI PD as being relevant, inspirational, ongoing, and that it fulfilled or exceeded their expectations. The terms "transforming" and "energizing" were often used to describe overall experience in the PD. Teachers expressed particular appreciation for the inspirational workshops and energized atmosphere at the Summer Institute.

Teachers of various subject areas and grade levels seemed eager to articulate details of their personal and professional growth as a result of HOT PD strategies. In particular, the encouragement to take risks and to take on the role of a student reportedly had a significant impact on teacher growth in arts-integrated teaching. Teachers described how they came away from the Institute with greater understanding of their

students' experiences in the classroom and how to reach them using the HOT hands-on strategies they learned in the workshops.

It also appeared that relevance was an important aspect of HOT PD, as teachers were pleased to choose from a wide variety of workshops and sequential learning tracks to suit their needs. A few teachers stated that they looked forward to attending future Institutes, because even though the same presenters might return each year, there were new topics, strategies and materials offered. Most participants in the study affirmed that the Summer Institute PD exceeded their expectations and they felt renewed as a result of the experience.

The issues that surfaced in the interviews were fewer by far than the benefits. Teachers voiced their concerns within the context of deep commitment to HOT Schools, and the issues were viewed as situations that might arise with any school program: administrative support, scheduling and time, financial concerns, transitory positions, and the ability to support the Strong Arts component due to local or state cutbacks or limitations in funding. Therefore, the issues are not a reflection on the failings of the HOT program, but rather are obstacles faced by educators eager to continue creating and teaching arts integrated curricula.

The overall teacher experience in HOT PD was positive, and resulted in teacher renewal and satisfaction. The learning climate was transformed, students were engaged, the HOT strategies were effective in reaching diverse student populations, teacher collegiality and parental support had increased, and ultimately, teachers felt valued. These findings were in agreement with other studies involving AI PD, where levels of

teacher satisfaction increased due to improvement in student engagement, school culture, collegiality, and in some instances the increased recognition of the value of teachers' work by supervisors or administration (Saraniero et al., 2014; Stevenson & Deasy, 2005).

The most prominent sentiment expressed by teachers who had experienced HOT AI PD was an overwhelming sense of renewal. Teachers felt inspired and energized through the comprehensive, hands-on PD, particularly at the Summer Institute. They also expressed confidence that ongoing PD throughout the year and the resources available through HOT Schools network would support or reinforce what they learned at any previous PD event.

Teachers' commitment to apply HOT AI PD in their classrooms and continue the program was evident when discussing the problems that occasionally occurred. The issues were viewed as challenges to overcome while working to build and sustain the three indispensable core components that form the HOT Schools approach: Strong Arts, Arts Integration and Democratic Practice, which work together to build upon student strengths in an arts-infused learning environment.

Assertions

In this section I present assertions based on my interpretations of the data collected in this study. In his discussion on producing generalizations in case study research, Robert Stake cited Fred Erickson's statement, "the most distinctive characteristic of qualitative inquiry is its emphasis on interpretation" (1995, p. 8). Stake further stated that "interpretation is a major part of all research" and "On the basis of observations and other data, researchers draw their own conclusions" (1995, p. 9). Stake

pointed out that these conclusions are referred to by Erickson as “assertions, a form of generalization” (1995, p. 9). Stake used the term naturalistic generalizations, which he defined as “conclusions arrived at through personal engagement in life’s affairs or by vicarious experience so well constructed that the person feels as if it happened to themselves” (1995, p. 85). On the basis of my interpretations of data, I present assertions drawn from my own naturalistic generalizations on the phenomenon of teacher experience in HOT AI PD.

The following assertions are based on teachers’ reported experiences and my observations of The Higher Order Thinking (HOT) Schools approach to AI PD. The program provided effective preparation to create and deliver arts integrated curricula to students. The HOT AI PD observed in this study took the form of experiential, hands-on, active learning for teachers. The PD sessions placed the teacher in the position of student, and thereby increased teachers’ understanding of the learners. Participant experience in the HOT approach to AI PD was inspirational, relevant and ongoing, supported by a network of teachers with common goals and experiences.

Positive teacher experience. The HOT AI PD experience was positive overall, despite a lack of confidence in integrating all art forms equally, particularly music. Teacher narratives were filled with expressions of appreciation and feelings of renewal and satisfaction. Teachers expressed enthusiasm for how they were able to reach students effectively through multimodal approaches. Any challenges that arose in the program were met with confidence and the assurance that solutions would be reached. The issues beyond teacher control, such as staffing and financial limitations, were acknowledged but

were not viewed as a source of discouragement or impediment to fulfilling the ideals of the HOT approach.

Enthusiasm. The findings showed repeatedly that teachers in existing HOT schools expressed enthusiasm for the PD program. In my experience meeting teachers and presenters at the Summer Institute and at the John Lyman School, all were open and friendly, and most were eager to talk about the HOT program and how it had altered their teaching practice. They also expressed their appreciation for my research of the program and the importance of informing the educational community about HOT Schools. They invariably spoke of how energized they felt as a result of their participation at the Institute and for many of them, it was one of many summers spent engaged in the weeklong offerings. Those who had attended multiple summers spoke of how the workshops were varied and different each year and there was always something new to learn. The PD was relevant, it was ongoing, there were choices, and teachers felt rewarded and happy for their success in reaching learners through the arts, all of which demonstrated an overwhelmingly positive experience in the HOT approach to AI PD, which and resulted in feelings of enthusiasm for the program.

Theoretical and philosophical foundation. A major strength of the HOT program that set it apart from other AI programs was a theoretical and philosophical foundation and reasoned source for the core components that combined to provide a model for success in teaching and learning. The HOT program's educational philosophy, emphasis on arts integration, democratic ideals, and its PD strategies and structures were inspired by the work of Benjamin Bloom (1995), John Dewey (1916), Howard Gardner

(1983) and Joseph Renzulli (2014). The specific contributions of these four educational theorists were discussed in detail earlier in this study. Together, they provided a foundation for the HOT program to incorporate the concepts of higher order thinking, school-wide enrichment, democracy in education, and multiple intelligences. Each of these influences complemented each other and played a significant role in the HOT PD program offerings and in creating an arts-infused, student-centered learning environment.

Themes and Issues

All of the categories relating to themes and trends (*teacher benefits, student benefits, HOT PD strategies, and how HOT builds community*) reveal an emphasis on teacher renewal and satisfaction, and its far-reaching effects on learning. At the center of this process of renewal is the teacher, who, through PD that is hands-on, relevant, and student-centered, and through increased collegiality with fellow educators, feels a sense of empowerment as a result using HOT tools and strategies to successfully reach and engage learners through a variety of modalities. The result is a transformation of the teaching and learning environment, teacher renewal, and ultimately, job satisfaction.

The issues appeared to emanate from one major source, that of school and/or district administration. In order to solve the issues and promote the positive themes of AI through the HOT approach, evidence suggests that administrative PD is a critical part of this process. But there is a step that must precede this: that of increasing the awareness of the value of arts learning so that the educational leadership as well as classroom teachers will recognize the possibilities of expanding learning through AI.

In today's pressured learning environment, with the emphasis on standardized

testing, Common Core, curriculum demands, and instructional time constraints, it can be difficult to convince administrators and teachers to go in a new direction, which they may view as one more initiative for which there is insufficient time to implement. In the words of a principal of an international HOT School, who reflected on the successes of integrated instruction in her school, “It makes schools and administrators see that this is not something else which is added, but just integration.” The HOT AI approach did not run counter to contemporary education initiatives, but supported the goals and objectives of Common Core and STEM.

Suggestions for Future Research

A limited number of studies have pointed toward the need for increased AI PD for teachers, based on the positive effects of AI on student achievement and school culture. Studies have indicated that AI was influential in increased student achievement in academic areas such as mathematics and writing (Miller, 2011; Snyder et al., 2014; Stevens, 2016c; Venzen, 2011); and an increase in overall standardized test scores (Snyder et al., 2014). Improvements were also reported in non-academic areas such as behavior and attendance for both students and teachers (Snyder et al., 2014; Stevenson & Deasy, 2005; Venzen, 2011) through transformation of the learning environment.

According to Amy Goldbas, an evaluation of the HOT program conducted by Columbia Arts Research showed that HOT School students outperformed their non-HOT colleagues in writing. Additional research on the effects of AI on writing skills could be conducted at various grade levels at HOT Schools. Comparative studies are recommended on student writing skills between HOT or other arts-integrated schools and

non-HOT or non-arts-integrated schools. Further studies are recommended to discover influential or causal relationships between AI and academic achievement, and changes in school culture. This might include studies on the effects of AI on standardized test scores such as mathematics or language arts test scores, which are highly prioritized in today's education and political climate. Future studies could focus on the influence of HOT or other AI programs in the college application process and acceptance rates at specific colleges, or possible trends in choices of college majors and career choices of graduates from HOT Schools or other AI school programs. Longitudinal studies could trace student test scores over a period of years or grade levels. Results of these studies might help school administrators and education policymakers understand the role that arts and AI might have in the schools. In particular, the data might inform decisions regarding development of AI PD programs for teachers similar to the HOT Schools program.

There is a need for further research on the effects of the HOT program on teaching practice, professional and personal renewal for teachers, and specific benefits of AI for students. Studies could focus on the effects of AI PD and AI programs in general on teacher job satisfaction and retention, perhaps showing the differences in retention rates and absenteeism between HOT and non-HOT schools. Research could also compare the effects of AI on student absenteeism and behavior referrals for schools in similar or different socio-economic areas.

Future studies might focus on benefits for teachers and students in specific subject areas or grade levels, and might compare arts integrated and non-integrated programs and their effects on teacher satisfaction, student achievement and overall school climate.

Research on a district-wide HOT program could be conducted in the New London School District, which at the time of this writing was in the process of implementing a K–12 aligned HOT program. Studies could trace the program throughout the grade levels, and could focus on areas such as PD, student achievement traced through multiple grade levels, the effects of PD on standardized test scores. The use of Robert Stake’s (1995) case study model would provide an effective methodology for collecting and analyzing data on the HOT program in a K–12 setting. As was the case in the present study, interviews with teachers and other educators on the HOT experience would provide a firsthand look at how the HOT program would be implemented from the primary level through middle school and high school levels. Interviews as well as observations of workshops and classroom instruction would yield specific information about whether teachers were receiving adequate PD experience for all grade levels and whether they had learned appropriate instructional strategies for students at the different grade levels. Since this study focused on elementary grades, it would be useful to study the K–12 setting to determine if PD is adequate, properly aligned, and whether it works holistically for K–12 as another bounded system.

Studies may also focus on individual HOT Schools, or could compare programs among several HOT schools to discover how the program varies in different school communities, in terms of emphasis on certain aspects of the HOT program, specific forms of PD, or student programs. For example, research might focus on the impact of Democratic Practice on AI instruction and school climate. Also, a comparison study could be carried out that examines the functions and influences of the Student Senate

among different HOT Schools.

Additional studies might focus on undergraduate, pre-service teacher preparation for AI instruction. The content and strategies employed at the graduate level or special certifications in AI instruction could be documented and might also follow teachers as they employ AI strategies in various school settings. Partnerships between colleges or universities and arts organizations could be explored to discover the content and strategies of AI PD programs.

Another area of research could explore the effects of AI on special needs students, such as second language learners, students in emotional support programs, students with physical disabilities, or students with behavioral issues. Studies could explore the development, implementation and effects of AI curriculums in gifted programs in public or private schools. Comparative studies could be carried out to examine differences in teacher PD among public or private schools for teaching gifted students through AI.

A Directive for HOT Schools

In her opening remarks at the Summer Institute, HOT Schools Director Bonnie Koba summed up the need to increase awareness of arts learning in her assertion of what the HOT program has been striving to accomplish for the past 22 years:

This is HOT Schools...it's Connecticut's unique brand for excellence in arts learning, making arts learning:

Visible: that can be seen; perceptible to the eye, apparent; manifest; obvious, being constantly or frequently in the public view; noting or pertaining to a system of keeping records or information in such a way that the desired reference can be

brought instantly to view.

Viable: practical, workable; vivid; real; stimulating as to the intellect, imagination or senses; having the ability to grow, expand, develop.

Valued: highly regarded or esteemed; relative worth, merit, or importance; the worth of something in terms of the amount of other things for which it can be exchanged or in terms of some medium of exchange.

At the core of HOT Schools is a delivery system that provides teachers, teaching artists, administrators, parents, and arts organization educators vital professional development, resources, tools and strategies to develop, deepen, and expand effective practices in arts education, arts integration, school culture change, and leadership development. We have the ability to make arts learning visible, viable and valued. We can do a better job of it. And the time is now (2015b).

Final Thoughts

There still exists in today's schools the same ideological challenge faced by the founders of HOT Schools in the early days of establishing the program. That is, many educators still need to become convinced of the value of the arts in education, that they are not a "special" subject but an academic subject equal to others. As Amy Goldbas, co-founder of HOT Schools, described their initial efforts at establishing a new school culture of arts-infused learning:

We needed to flip the dynamics so that the arts and arts teachers were not low men and women on the totem pole; that they were valued, that they became leaders in their schools; that we looked at curriculum mapping to help non-arts

classroom teachers understand that the arts teachers had rigorous curriculum, and that it could contribute to a student's confidence, a student's understanding of vocabulary, a student's ability to listen and speak articulately.

Goldbas shared her final thoughts on the impact of teachers on our world:

You get to see that there's really deep, rich, thoughtful learning happening and that the arts facilitate that. ... I think in this day and age we really underestimate what it means to support teachers in joyful teaching and providing them with the opportunity to really teach kids as opposed to drilling kids and collecting data on how well they've absorbed what they been drilled with... I think that I have never worked with people who are more dedicated, more underestimated in terms of their impact on our world - and I don't mean to be overstating it and I don't think that overstates it - I think teachers are the critical partner in terms of transforming our ability to live peacefully together. And I really think that HOT Schools tries in every way to create a sense of community for them so that they feel supported.

This study contributed to the understanding of what constituted effective AI PD for teachers. The study showed there were many benefits of AI for students, but equally significant were the effects of AI on the teachers themselves who, through comprehensive and ongoing HOT AI PD, experienced personal growth and renewal as they learned how to integrate the arts and transform the learning environment. Teachers I observed at HOT schools exuded a level of happiness and a lack of stress in their daily work that I did not see in my years of teaching in the public school. I conclude that the

overarching message of this study is that HOT schools PD resulted in self-discovery and deep job satisfaction for teachers. As Louise Pascale observed:

I think, most importantly, the teachers find themselves again. They actually remember why they love teaching. They find their own creative genius. They tap into their own creativity - and I think it sort of gets beaten out of them - but when they start using the arts, they discover it, and it feeds them as much as it feeds the kids, which is an incredible thing.

Appendix A - Recruitment Letter

College of Fine Arts
Music Education Department
855 Commonwealth Avenue
Boston, Massachusetts 02215
(617) 353-6888

Dear educator,

I am writing to invite you to participate in a research study and share your expertise and experiences related to the HOT Schools professional development program. As an experienced public school educator of 22 years, I have identified a growing need for quality professional development programs to support arts integration teaching. This has led me to focus my dissertation research upon the success of the HOT Schools approach developed at a number of Connecticut schools. I plan to conduct a case study to explore aspects of the program and hope that the findings might inform arts integration professional development and teaching practices in the greater educational community.

I hope that you will consider participating in one or two of the following ways. First, I would like to invite you to complete an anonymous online questionnaire via Survey Monkey. The questionnaire should take approximately 20 minutes. At the end of the questionnaire you will have the opportunity to volunteer for a follow-up interview via email, phone, Skype, or in-person at a time convenient for you. This optional interview should take approximately 30 minutes.

Your participation in the case study is voluntary. Please be assured that your participation will remain anonymous and your responses kept confidential, therefore no names will be used in the research report. All participants will be assigned numbers, and all names, emails, and data obtained during the study will be stored in password-protected and locked locations and will be destroyed at the conclusion of this project. You may choose to withdraw from the study at any time.

It is my hope that you will share your experience in the HOT Schools professional development by participating in this study. The knowledge that you contribute may expand the understanding of the arts integration professional development process, and may help other teachers to transform their teaching practices. Should you have any questions or concerns about the research process, please do not hesitate to contact me at landley@comcast.net or my dissertation advisor, Tawnya Smith at tdsmith7@bu.edu. This research has been reviewed and approved by the Boston University Institutional Review Board. If you have questions about your rights as a research subject or want to speak with someone independent of the research team, you may contact the Boston University IRB directly at 617-358-6115

If you agree to participate, you may enter the questionnaire by clicking on the following link: <https://www.surveymonkey.com/s/landley>

Thank you very much for your participation!

Lisa Landley

Appendix B - Background Questionnaire: Arts Specialist Teacher

Name:

Teaching position:

Contact information:

 Email address:

 Phone number:

Educational Background:

Teaching Experience (years and grade levels/subjects):

Years as a HOT School teacher:

1. Describe your views and experience in arts integration before participating in HOT professional development.
2. Describe your comfort level collaborating with classroom teachers before you participated in HOT professional development.
3. Describe the extent to which you believed classroom teachers viewed the arts as fundamental to quality learning prior to your HOT professional development.
4. Describe any misgivings about AI you may have had prior to your HOT professional development experience.

Thank you for your participation. Please indicate below if you will consent to participate in an interview lasting approximately 45 minutes. The interview may be conducted over the phone, via Skype, or in person, according to your preference. Please indicate your preference whether to be contacted by email or phone to set up the interview.

_____ Yes, I will participate in an interview.

_____ I prefer email.

_____ I prefer a phone call.

_____ No, I will not participate in an interview.

Appendix C - Background Questionnaire: Non-Specialist Teacher

Name:

Teaching position:

Contact information:

 Email address:

 Phone number:

Educational Background:

Teaching Experience (years and grade levels/subjects):

Years as a HOT School teacher:

The following questions are related to your thoughts *prior to HOT school professional development*:

1. Describe your views on arts integration before participating in HOT professional development.
2. Describe your comfort level with integrating the arts in your classroom before you participated in HOT school professional development.
3. Describe the extent to which you believed the arts in the classroom were fundamental to quality learning.

Thank you for your participation. Please indicate below if you will consent to participate in an interview lasting approximately 45 minutes. The interview may be conducted over the phone, via Skype, or in person, according to your preference. Please indicate your preference whether to be contacted by email or phone to set up the interview.

_____ Yes, I will participate in an interview.

_____ I prefer email.

_____ I prefer a phone call.

_____ No, I will not participate in an interview.

Appendix D – Teacher Interview Questions, Specialist and Non-Specialists

Consent script: This interview will take approximately 45 minutes. It will be audio-recorded and handwritten notes will be taken. Do you give your consent to proceed with the interview?

1. How would you describe your initial HOT Schools arts integration professional development experience?
2. How would you describe recent professional development experience?
3. Please describe how your HOT professional development experience has changed from the beginning to the present time.
4. Is there a particular form of HOT professional development that you consider the most effective or helpful to you in your teaching practice?
5. Has there been any form of HOT professional development lacking in effectiveness for any reason?
6. How would you describe your overall experience in HOT professional development?
7. How has the HOT professional development influenced the way you think about your teaching practice?
8. How has HOT professional development changed your teaching practice?
9. How has HOT professional development influenced the learning environment of your classroom?
10. How has HOT professional development influence your relationships with other teachers?
11. How has HOT professional development influenced your relationships with students?

12. How has HOT professional development influenced your relationships with parents?
13. How has HOT professional development influenced your relationships with administration and non-teaching staff?
14. How has HOT professional development changed your view of teacher collaboration?
15. How has the HOT Schools AI professional development affected your overall teaching experience?
16. What were the challenges involved in beginning the new program?
17. To what extent did the program meet or exceed your expectations?
18. To what extent do you think did the HOT professional development program meets its stated goals?
19. What improvements or modifications, if any, would you like to see in the HOT Schools professional development program?
20. Please add any further reflections on your experience with the HOT Schools AI professional development program.

Additional Interview Questions: Arts Specialist Teachers

1. How has HOT professional development altered your attitude about arts integration?
2. How has HOT professional development influenced your experience in collaborating with classroom teachers?
3. Describe your learning experience with teaching artists from outside the school community.
4. Please describe your reasons for any particular preference of academic subject with which to integrate your specialty area.

5. Describe how HOT professional development has changed your views on arts integration.

Additional Interview Questions: Non-Specialists Teachers:

1. How has HOT professional development increased your artistic skills?
2. How has HOT professional development influenced your experience in collaborating with arts-specialist teachers?
3. Describe your learning experience with teaching artists from outside the school community.
4. Please describe your reasons for any particular preference of an art form for integration in your classroom.
5. Describe how HOT professional development has changed your views on the arts as modes of inquiry equal to other subjects.

Appendix E – Interview: Principal at HOT School

Consent script: “This interview will take approximately 45 minutes to complete. There will be handwritten notes and an audio recording taken. Do you consent to be interviewed?”

1. What were the circumstances or main issues that prompted your school to become a HOT school?
2. Did you anticipate any challenges in the program?
3. What were the challenges in becoming a HOT school?
4. What were your primary goals of AI professional development when you decided to join the HOT Schools program?
5. What were your expectations for faculty members who first participated in HOT professional development?
6. What are the organizational structures you have developed to sustain the HOT approach at your school?
7. Describe the frequency of ongoing professional development in which your staff participates.
8. Describe any challenges in collaboration among staff members, with regard to scheduling or other aspects.
9. What is your advice for administrators considering the HOT school approach?

Appendix F - Interview: HOT Schools Program Director

Consent script: This interview will take approximately 45 minutes. It will be audio-recorded and handwritten notes will be taken. Do you give your consent to proceed with the interview?

1. What were the circumstances or main issues that prompted you to become involved in the HOT school program?
2. Did you anticipate any challenges in developing the program?
3. What were the challenges, if any, in becoming a program director for HOT schools?
4. What were your primary goals of AI professional development when you decided to join the HOT Schools program?
5. What were your expectations for faculty members who first participated in HOT professional development?
6. What are the organizational structures you have developed to sustain the HOT approach at various Connecticut schools?
7. Describe the frequency of ongoing professional development in which HOT school staff participates.
8. Describe any challenges in collaboration among staff members, with regard to scheduling or other aspects.
9. What is your advice for administrators considering the HOT school approach?
10. What are your plans for new professional development programs?

Appendix G - Interview: Program Evaluator

Consent script: This interview will take approximately 45 minutes. It will be audio-recorded and handwritten notes will be taken. Do you give your consent to proceed with the interview?

1. How did you become associated with Hot Schools as an evaluator?
2. Have you evaluated similar programs to HOT, those that involve arts integration and arts integration professional development?
3. In your view, how does HOT compare to other arts integration professional development programs? (Similarities & differences)
4. Describe your overall impressions of the HOT summer institute? (strengths, weaknesses)
5. Please offer comments and insights on the effectiveness/quality of the special features of the Summer Institute: sequential tracks, workshops, informances, etc.
6. Have you evaluated other forms of HOT PD?
7. What do you consider to be the essential elements of AI PD?
8. To what extent do you believe HOT meets or exceeds its stated goals and objectives?
9. Do you think this program could be replicated in other states, and if so, what - if any - modifications would be needed?
10. Closing remarks, summary.

Appendix H: - 2015 HOT Summer Institute Presenter Interview Questions

Consent script: This interview will take approximately 45 minutes. It will be audio-recorded and handwritten notes will be taken. Do you give your consent to proceed with the interview?

1. What is your primary goal for first-time teacher participants in your AI presentations?
2. What advice would you offer classroom teachers with an interest in AI who lack confidence in their musical or artistic abilities?
3. What do you consider the best environment or setting for arts integration professional development?
4. What do you consider to be the greatest challenge(s) in providing effective professional development in arts integration?
5. Do you advise co-teaching or team teaching as the most effective means of fully integrating the curriculum?
6. What do you consider the best strategy or advice in the effort to convince public school administrations of the value of AI and to advance the practice of AI in the public schools?
7. What do you consider the greatest challenges in implementing arts integrated curriculum in the public schools, especially in view of the current emphasis on standardized testing?
8. Which aspects of the HOT approach to arts integration professional development do you consider the most effective?
9. What do you consider essential components of college curriculum requirements to prepare pre-service teachers for arts integration?

10. Describe the ideal setting (organizational structures, scheduling, professional development, etc.) that would support a fully integrated curriculum in the schools.

Appendix I - Observation Protocol: Professional Development

Type of session/seminar/workshop/institute:

Organizational structure:

Length of session(s):

Participants:

Presenters:

Topics:

Materials:

Presentations/lectures:

Activities:

Closing activities/remarks:

Teacher discussions/responses:

Summary discussions/lectures:

Appendix J - HOT Professional Development Teacher Experience

Total interviews: 24

Demographics:

1. Classroom Teachers: 8 (includes 1 special ed)
2. Specialist Teachers: 2
3. Professors: 3
4. Public School Administrators: 1
5. Teaching Artists: 4 (includes 1 specialist teacher from above)
6. Program Directors: 4
7. Program Evaluators: 1
8. Parents: 4 (1 now a director, 2 previous teachers now TAs, 1 teaches at non-HOT H.S.))
9. PD Presenters at Summer Institute: 7 (includes 2 teachers, 1 program dir)

Themes

1. PD is relevant , inspirational, ongoing, fulfills or exceeds expectations
2. PD is hands-on, student-centered
3. Arts learning and HOT School program development as process rather than product
4. PD involves teachers teaching teachers
5. Importance of professional teaching artists in PD
6. Reaching/engaging students more effectively, diverse learning styles, special needs, ESL
7. Transformation of learning/teaching environment, student-centered learning, student ownership of learning process, student-teacher relationship.
8. Enhanced collegiality and communication among teachers (co-teaching), teachers and teaching artists, and between teachers and administrators.

9. Enhanced relationships with parents.
10. Effects on student growth: improved socialization skills, leadership, behaviors, attendance
11. 21st century work skills
12. Community

Issues

1. Implementation and Sustainability of Strong Arts tenet of program
2. Administrative support and PD
3. Scheduling and time
4. Transitory positions – administrators and teachers
5. Inconsistencies among HOT schools regarding level of involvement, commitment to all 3 tenets
6. Financial issues

Appendix K – Coding Matrix, Themes and Issues

Inter- view #	Demographic Key									Themes Key												Issues Key					
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
1						x				3			1	1	1		1	2			5	1		3	2		
2					x						2			2		2			1								
3						x				3			3	2							1	4	2	4	1		
4	x									1				1		4		1					4				
5	x									4				2	1	3										1	
6						x				3			1		1	3						2	2	1			
7	x									5		1		2	2	1		1				3	1				
8								x		1				2			1	1	1	1		2	1				
9	x							x			1			2		2							2				
10	x							x						1	1	1						1	1				
11		x			x						1		1	1	2		1			1		1	2				
12	x									3				2	1	2	2	1	1				1				
13	x										2			1	3	3		2	3	3							
14	x									4	1			1	4	3	1		3	4			1			1	
15	x							x		3				1		1						1					
16														1								1	2		1	1	
17			x							2				1	1	1		1									
18			x							1	1			2	1		1				9	2	4			2	
19					x					1	1			1	3			2			1					2	
20							x				2			1		2		1	1		3	2				2	
21					x					2		1		2	2	3		1									
22								x		2	2	1				1										1	
23				x						1		2		2	2	2		1								1	
24			x					x		4				2	1		1									1	
Total	9	1	3	1	3	3	1	0	6	43	13	5	6	11	34	22	33	5	18	2	9	20	28	28	9	6	8

Appendix L - What to Look For in a Higher Order Thinking (HOT) School:

A HOT School is always in the process of “becoming.”

HOT Schools strive to create a seamless flow of learning in, about and through the arts through Strong Arts, Arts Integration, and Democratic Practice.

Evidence of learning in, about and through the arts:

Strong Arts

- An arts energized environment
- All disciplines are valued equally within the curriculum and are taught with integrity, creativity and *independence*
- Standards-based dance is taught
- A rigorous arts curriculum in place
- Students express themselves through dance, music, visual arts and theater
- Appropriate music, movement, and exhibition spaces
- Dedicated arts classrooms
- Strong arts objectives are reinforced in the classroom
- Arts processes and products are celebrated as the final results of student learning
- Concerts may be “informances” rather than “performances”
- Standards-based theater is taught

Arts Integration

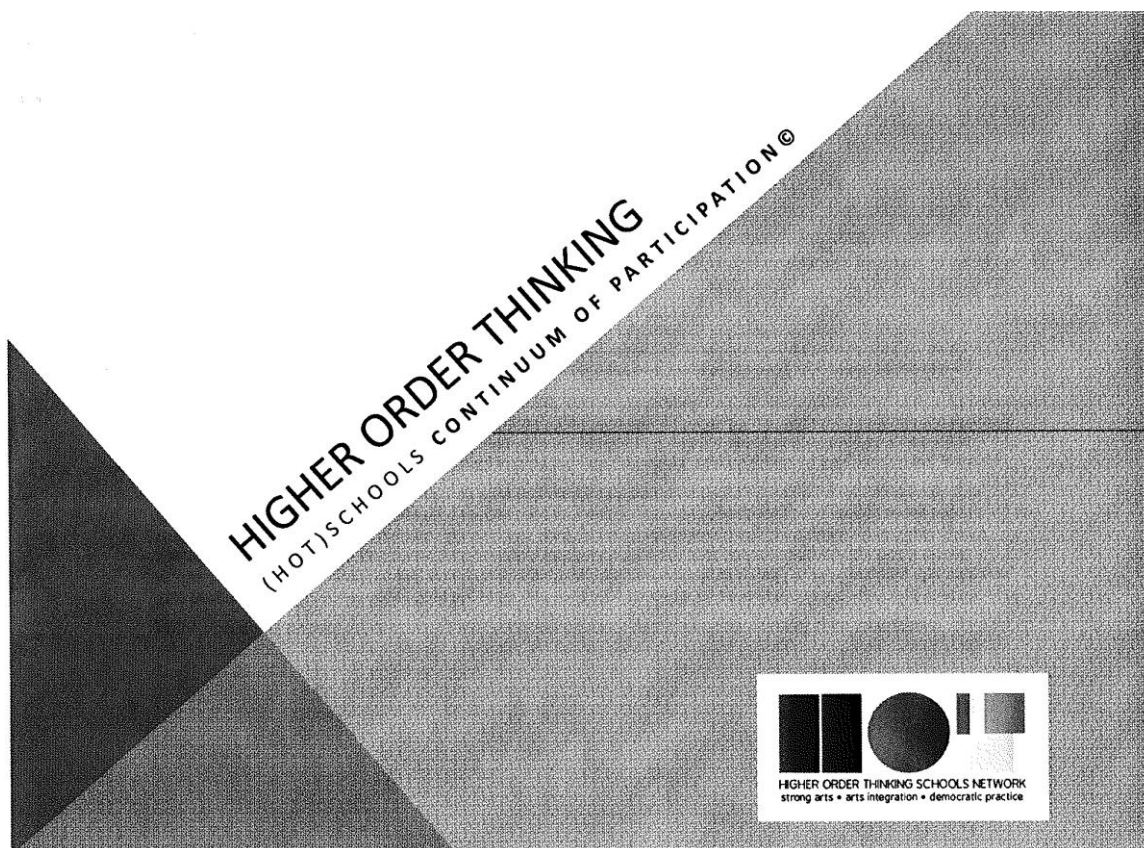
- Curricular map or chart is posted
- Learning centers
- Flexible scheduling
- Extensive school libraries
- Project stations for independent work

- All disciplines are valued equally within the curriculum and are taught with integrity, creativity and *interdependence*
- General education objectives are reinforced in the arts rooms
- Strong arts objectives are reinforced in the classroom
- Arts processes and products are celebrated as the final results of student learning
- Concerts may be “informances” rather than “performances”
- Visiting artists plan long-term collaborations to teach literacy in their arts discipline
- Arts teachers and classroom teachers routinely plan and collaborate with each other
- Flexible schedules allow arts teachers to participate in grade level planning

Democratic Practice

- Children actively engaged in the process of exploration and inquiry
- A child-centered mission
- Child-centered environment reflecting input and choices of children (i.e. exhibits designed and hung by children reflecting their perspective)
- A strong and active parent presence
- Successful, ongoing partnerships with community cultural resources
- Evidence of student involvement in decision making (class and school constitutions)
- Evidence of a common language

Appendix M – Continuum of Participation



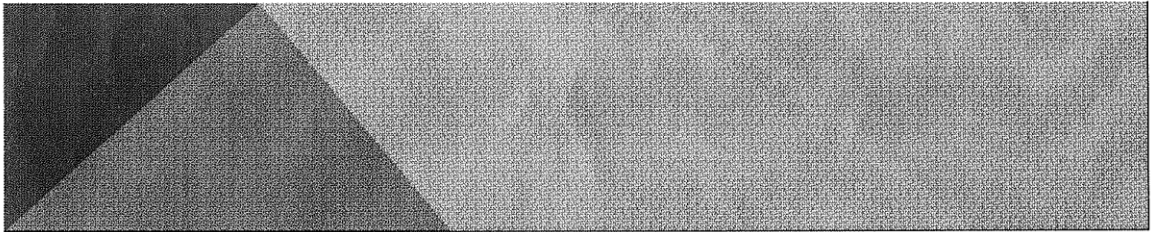
ABOUT HIGHER ORDER THINKING SCHOOLS

Higher Order Thinking (HOT) Schools is a community of practice that networks and develops entities interested in teaching and learning in, about, and through the arts using the HOT Approach. HOT practices and strategies stimulate student curiosity, ignite their sense of wonder, empower students so they feel invested in their school and their learning, and steer students toward a journey of lifelong learning. Students who attend a HOT school enjoy numerous outlets for expression and for reinforcement of the intrinsic value of their thoughts.

The program builds higher-order thinking skills and prepares students to be successful learners and contributors in the 21st Century through strong arts, arts integration, and democratic practice. In HOT schools, the arts are rigorous academic subjects, each with its own sequential curriculum that conveys knowledge not learned through other academic disciplines. HOT Schools teachers work collaboratively to structure interdisciplinary curricula that promote deep learning of subject matter, higher order thinking, creativity and teamwork by strategically linking learning in the arts to learning across the curriculum.

The HOT Approach is an innovative delivery system that provides teachers, teaching artists, administrators, parents, and arts organization educators vital professional development, resources, tools and strategies to develop, deepen and expand effective practices in arts education, arts integration, school culture change, and leadership development.

HOT Schools participate in ongoing professional development and employ the HOT Approach to advance teaching and learning along a continuum from Arts Access, to Arts Connections and Correlations, to Arts Integration.

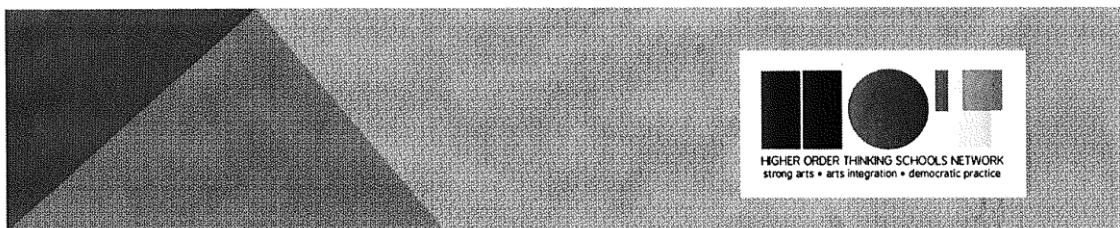


THE CONTINUUM

The **HOT Schools Continuum of Participation** is a guide that helps schools identify their current depth of practice toward "becoming" a Higher Order Thinking School and to develop a plan to advance along the continuum from:

- **Arts Access**, where schools provide students with exposure to the arts through field trips, school or classroom visits, performance(s), "informance(s)," and/or lecture demonstrations by artists or artist groups. To
- **Arts Connections and Correlations**, which extend Arts Access experiences and begin to make connections between the arts experience and curriculum. To
- **Arts Integration**, which are sequential arts learning experiences that weave ideas and concepts between and among arts and non-arts disciplines, effectively advancing knowledge and/or skills in an arts discipline while concurrently advancing knowledge and/or skills in other disciplines.

HOT Schools recognizes the value of each point on the Continuum and that that varied conditions impact a school's place on the continuum and its capacity to progress along it. Two key ingredients toward advancing are staff commitment and administrative support. HOT Schools believes any school can advance along the continuum if these two conditions are present.



HIGHER ORDER THINKING SCHOOLS CONTINUUM OF PARTICIPATION ©

FOR SCHOOLS, TEACHING ARTISTS AND ARTS ORGANIZATIONS

WHAT IT IS ... MOVING ALONG THE CONTINUUM. ... → ... → ... →



Access

Exposure to arts through field trips, school or classroom visits, performance(s), "informance(s)," and/or lecture demonstrations by artists or artist groups.

May or may not include a study guide or cultural or academic connections highlighted during the presentation/experience.

How To Advance: Begin to define goals for arts learning and arts experiences for school community.

Explore different opportunities in various art forms; engage a HOT Coach to develop a progression plan; participate in HOT School Program professional development. Begins to build support for arts and arts integrated learning



Connection Correlation

Extension of Arts Access experiences through a pre or post-event study guide, workshops, or other resources provided by the service provider/community partner, or cultural or academic connections highlighted throughout the event.

Short-term residencies (2-5 visits, with the same group of learners) with defined program goals and objectives, and evaluation component. Includes some planning between artist/org and school.

Goals and plan in place (and supported by administration) to advance along the HOT Continuum

How To Advance: Participate in HOT PD; begins to make connections / correlations between disciplines; begins to address Common Core State Standards and learning goals in arts and non-arts classrooms. Strengthens support for arts and arts integrated learning



Integration

Sequential arts learning experiences that weave ideas and concepts between and among arts and non-arts disciplines.

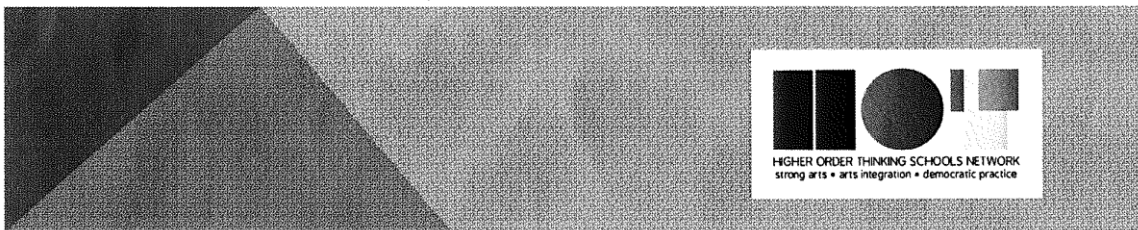
Long term residencies(10+ visits, with the same group of learners) include an intensive collaborative planning and reflection process between the service provider and user that incorporates documenting and collecting evidence of impact throughout.

In-school unit development integrates local arts and cultural resources as a natural component of teaching and learning (global classroom); instructional practice effectively advances knowledge and/or skills in an arts discipline while concurrently advancing knowledge and/or skills in other disciplines.

Instruction aligns with Common Core Standards.

How To Advance: Continue participation in HOT PD and leadership development; shares best practices with other educators. Deepen partnerships, community and district support for arts and arts integrated learning

HOT Schools provides professional development and a Menu of Services to help schools move along the Continuum. Email HOTSchools@wesleyan.edu



HIGHER ORDER THINKING SCHOOLS CONTINUUM OF PARTICIPATION ©
 FOR SCHOOLS, TEACHING ARTISTS AND ARTS ORGANIZATIONS

HOW WE HELP



Access

Compile a Arts & Cultural resource guide of Connecticut arts & cultural organizations and venues, (identifying those with known educational programming), and performing and teaching artists and groups

Make access to the resource guide broadly available by posting on COA web site and a link to it from CSDE web site, as well as a link to the grant opportunity from the COA web site

Circulate information to schools and school districts through CSDE e-contact lists

Work with CSDE to provide reciprocal access for service providers to connect with schools & districts

Encourage relationship building with an arts and cultural organization to which schools have been exposed

Provide advisory services, convenings, showcase for service providers and users to connect with each other



**Connection
Correlation**

Compile and circulate Connection/Correlation examples/post on website

Hold Leadership(s) highlighting arts & cultural collaborative partnerships

Hold Professional development at arts & cultural organizations to highlight their programming

Provide professional development for schools

Provide Professional development for arts & cultural organizations to become aware of each other, their work and school outreach programming and to address challenges

Provide examples of ways in which an arts access opportunity can support (lead to) an Arts Connection curriculum

Help to develop meaningful partnerships with artists and arts and cultural organizations.



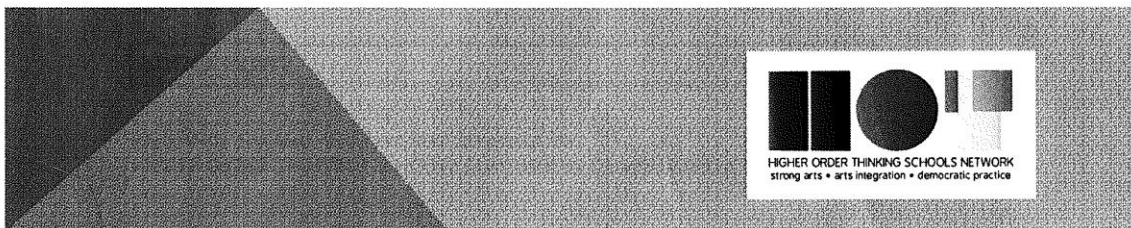
Integration

Provide guided planning for arts integration unit development for artists, arts & cultural organizations and schools

Provide examples of exceptional arts integrated units of study and collaborative partnerships

Provide observation opportunities (Leaderships)

Develop mentorship/coaching for teachers, teaching artists, arts organization educators and administrators



HIGHER ORDER THINKING SCHOOLS CONTINUUM OF PARTICIPATION ©
 FOR SCHOOLS, TEACHING ARTISTS AND ARTS ORGANIZATIONS

POLICY GOALS



Access

To educate schools on the value of arts experiences in teaching and learning
 To educate schools about available resources to provide exposure to the arts
 To serve as an entry point for schools on the HOT Continuum of participation
 To encourage schools to advance arts learning along the HOT Continuum

ARTS LEARNING POLICY IMPACT:
 Encouraging schools to be excited about arts learning through participation in arts experiences.



Connection

Deepen the value of arts experiences in teaching and learning in the classroom connecting those experiences to the curriculum
 Create meaningful partnerships with artists, arts & cultural organizations

ARTS LEARNING POLICY IMPACT:
 Arts classroom teachers begin to plan with non-arts classroom teachers.
 Arts value gains momentum in school culture while raising visibility of State arts & Cultural resources.
 Teachers begin to include arts learning in instructional practice and their professional goals.
 Student engagement is increased.

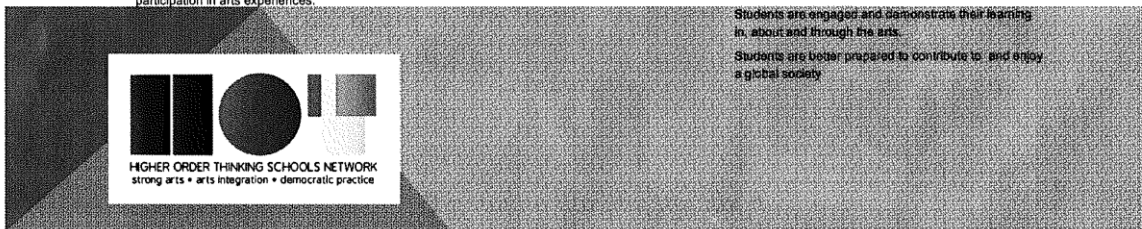


Integration

Ensure a well-rounded and high quality educational experience for students that is grounded in HOT practices - learning in, about and through the arts.
 Develop meaningful, sustainable relationships between schools, artists, arts and cultural organizations.
 Embed arts integration as an enduring practice in school culture

Guide instructional practice away from rules-based thinking toward pattern recognition and higher order thinking
ARTS LEARNING POLICY IMPACT:
 State Arts & Cultural Institutions and arts classroom teachers become critical resource partners in education
 Arts Integration and collaborative planning are integral components of instructional practice in arts and non-arts classrooms.

Students are engaged and demonstrate their learning in, about and through the arts.
 Students are better prepared to contribute to, and enjoy a global society.



Appendix N. – The HOT Schools Tool to Guide Continuous Growth and Development

(This appendix was created by adapting the slides from a Power Point presentation.)

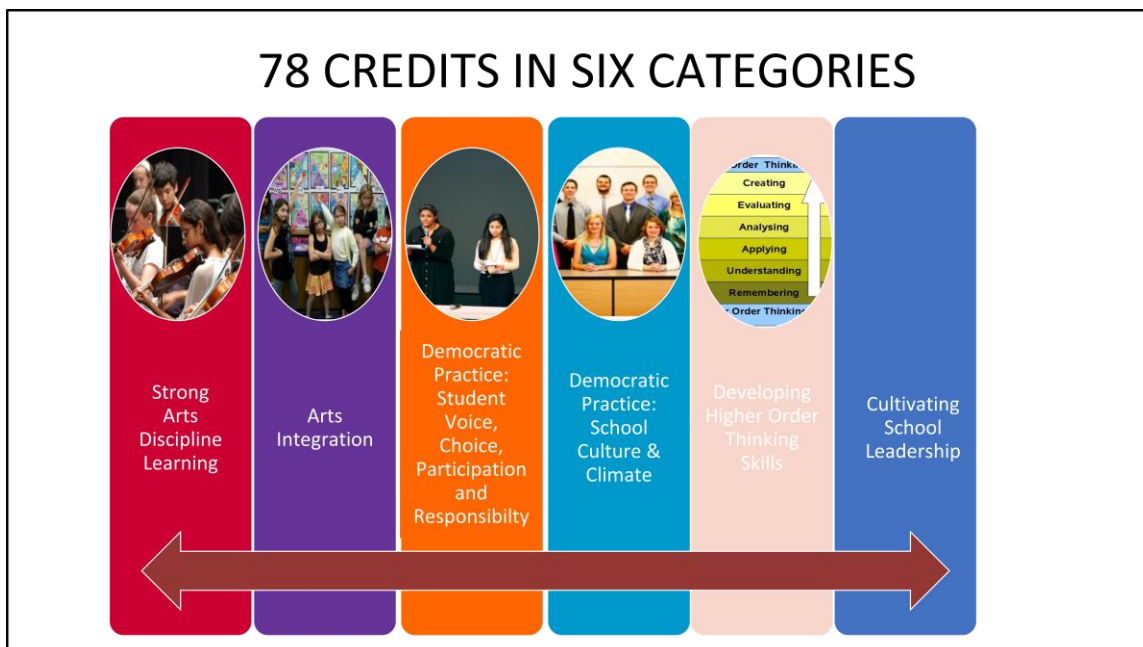
The HOT Schools Tool to Guide Continuous Growth and Development

Developed by Evaluator Louise K. Stevens



The HOT SCHOOLS Continuum

- Designed to be used by school administrators and instructional teams to set annual goals and benchmarks and self-assess progress along the HOT Schools Continuum.
- Designed for joint use by HOT Schools coaches and school administrators to guide progress.
- Designed to be used by the HOT Schools Program Staff to document school improvement, design appropriate professional development and to acknowledge schools for growth & development.



Note: On the next seven charts, a column for “Total Score” was included on the original slide, but it has been deleted here for space considerations.

Levels of Achievement, Continuum of Improvement
Strong Arts Taught as Disciplines

The arts as rigorous academic subjects, each with their own sequential, Aligned with National Core Arts Standards	Level of Achievement	Indicators	Total Possible Credits = 13
<p>Creating: Conceiving and developing new artistic ideas and work.</p> <p>Performing: Presenting and sharing artistic work.</p> <p>Responding: Perceiving and analyzing artistic work.</p> <p>Connecting: Relating artistic work with personal meaning and context.</p>	Access	<p>All students given the opportunity to generate and conceptualize artistic ideas and work in one art discipline.</p> <p>All students present or perform in one art discipline once per semester/term.</p> <p>All students respond to presented student work as audience once per semester/term.</p> <p>All students participate in relating artistic work to context and/or personal meaning.</p>	3-Jan
	Connections	<p>All students given the opportunity to generate and conceptualize artistic ideas and work in two + disciplines.</p> <p>All students present or perform in two+ arts disciplines once per semester/term.</p> <p>All students respond to field trip creative experience once per year, relating artistic work to context and personal meaning.</p>	6-Apr
	Correlations	<p>All students given the opportunity to generate and conceptualize artistic ideas in <u>two + disciplines as well as in the classroom.</u></p> <p>All students engaged in formal review/critique of artistic work in two + disciplines as well as in one subject classroom.</p>	9-Jul
	Mastery	<p>The process of creating artistic ideas and work, presenting and sharing work; analyzing artistic work; and relating artistic work to context and personal experience is a monthly part of all subject learning for all students with instructor assessment of student artwork in each subject.</p>	12-Oct
	Innovation	Extra point given at any of the above levels for innovative instructional methods of reaching the indicator.	1

Levels of Achievement, Continuum of Improvement

Arts Integration

Arts Integration: Sequential learning experiences that weave ideas/and or concepts between and among arts & non-arts disciplines concurrently advancing knowledge in both.	Level of Achievement	Indicators	Total Possible Credits = 13
<p>Art discipline teachers and classroom teachers jointly plan and teach integrated curriculum.</p> <p>Students use artistic processes to learn and demonstrate learning in other subjects.</p> <p>Classroom teachers provide instruction and assessment to meet art standards.</p> <p>Arts instructors provide instruction and assessment to meet other subject standards.</p>	Access	<p>Three + classrooms per year provide visiting artist learning experiences for students.</p> <p>All students have at minimum of one field trip experience per year specifically addressing arts and another subject – i.e. arts and history, arts and literature, etc.</p>	3-Jan
	Connections	<p>Three + classrooms per year have full TAC residencies.</p> <p>At least 25% of all faculty have participated in a Summer Institute learning integrated teaching methods.</p>	6-Apr
	Correlations	<p>Collaborative teaching between arts instructors and other instructors is planned, implemented and assessed in 40% of classrooms for one + unit per semester.</p> <p>At least 50% of all faculty have participated in a Summer Institute learning integrated teaching methods.</p>	9-Jul
	Mastery	<p>Students in every grade participate in a TAC once per year.</p> <p>At least 70% of all faculty have participated in a Summer institute learning integrated teaching methods.</p> <p>Collaborative arts/other subject instruction is planned, implemented, and assessed in 60% + of classrooms for two + units per semester.</p> <p>All student progress reports/report cards score student learning in and through the arts to learn other subjects.</p>	12-Oct
	Innovation	Extra point given at any of the above levels for innovative instructional methods of reaching the indicator.	1

Levels of Achievement, Continuum of Improvement
Student Voice, Choice, Participation & Responsibility

Cultivating a culture in which purposeful activities support student voice, choice, contribution and responsibility.	Level of Achievement	Indicators	Total Possible Credits = 13
<p>Students work collaboratively in small groups to make decisions, solve problems, and develop original work.</p> <p>Instructional methods in the classroom are designed to elicit student voice and support student choices.</p> <p>School-wide town meetings and similar events and exhibits present student voice in a variety of arts and integration opportunities.</p>	Access	<p>25% of faculty are fluent in instructional and classroom management methods encouraging student voice and choice.</p> <p>There is a school wide town meeting, exhibit, or similar event presenting original student work curated or designed by students once per semester/term.</p>	3-Jan
	Connections	<p>40% of faculty are fluent in instructional and classroom management methods encouraging student voice and choice.</p> <p>All students have the opportunity to work in collaborative small groups and to do independent learning in at least one subject once per semester.</p>	6-Apr
	Correlations	<p>60% of faculty are fluent in instructional and classroom management methods encouraging student voice and choice.</p> <p>All students have the opportunity to work in collaborative small groups and to do independent learning in two + subjects on average once a month.</p> <p>There are school wide town meetings, exhibits, or similar event presenting original student work curated or designed by students once per month.</p>	9-Jul
	Mastery	<p>75% of faculty are fluent in instructional and classroom management methods encouraging student voice and choice.</p> <p>All students have the opportunity to work in collaborative small groups and to do independent learning in all subjects once per unit.</p> <p>There are school wide town meetings, exhibits, or similar event presenting original student work curated or designed by students once per month.</p>	12-Oct
	Innovation	<p>Extra point given at any of the above levels for innovative instructional methods of reaching the indicator.</p>	1

Levels of Achievement, Continuum of Improvement

Democratic Practice

Creating an energized school community that values the unique voice of each community	Level of Achievement	Indicators	Total Possible Credits = 13
Faculty are encouraged to employ creative engagement methods to stimulate student involvement.	Access	School leaders model and encourage creative engagement methods for all faculty. Teachers and students establish a magic mailbox approach and editorial committees.	3-Jan
The School makes use of a magic mailbox or similar device to encourage and collect student work. Student committees are active each month in peer review and recognition of student work.	Connections	Faculty at all grade levels and representing all subjects are engaged in HOT Schools goal setting once per year. Faculty at all grade levels and representing all subjects are engaged in evaluating HOT Schools progress, including setting benchmarks for accomplishment, once per year. There is a student government.	6-Apr
Students run a student government and offer opportunities for students to participate in school-wide decisions to improve their school and learn stewardship.	Correlations	Students in all grade levels have the opportunity to do at least one participatory community based learning experience per year. Students are engaged in school improvement strategies, working formally along-side faculty and staff to develop goals and strategies.	9-Jul
Learning across subjects is participatory. Students are engaged in work that connects them to the outside community.	Mastery	Faculty, staff, and students are involved in HOT planning, including setting strategies for school improvement, setting benchmarks and determining indicators of success every semester. The magic mailbox process is fundamental to school community life for all students and faculty. 60% + of faculty engage students in formal self-assessment of their learning across subjects. Students across grades are given opportunities to participate in community events, including representing their work to school boards and other civic groups.	12-Oct
	Innovation	Extra point given at any of the above levels for innovative instructional methods of reaching the indicator.	1

Levels of Achievement, Continuum of Improvement
Higher Order Thinking

Teaching practice and demonstrated learning that reflects the interconnectedness of higher order thinking skills and the arts.	Level of Achievement	Indicators	Total Possible Credits = 13
<p>Faculty teach using instructional methods that foster higher order thinking skills in students.</p> <p>Classroom assessment of student learning in all subjects includes rubrics measuring higher order thinking skills.</p> <p>Arts integration is used throughout the school to foster higher order thinking skills for all students.</p>	Access	<p>25% of faculty demonstrate fluency in their use of instructional methods that foster higher order thinking skills.</p> <p>25% of faculty design and use assessments measuring higher order thinking skills.</p>	3-Jan
	Connections	<p>40% of faculty demonstrate fluency in their use of instructional methods that foster higher order thinking skills.</p> <p>40% of faculty design and use assessments measuring higher order thinking skills.</p> <p>40% of faculty design and teach arts integration that specifically target higher order thinking capacity.</p>	6-Apr
	Correlations	<p>60% of faculty demonstrate fluency in their use of instructional methods that foster higher order thinking skills.</p> <p>60% of faculty design and use assessments measuring higher order thinking skills.</p> <p>60% of faculty design and teach arts integration that specifically targets higher order thinking capacity.</p>	9-Jul
	Mastery	<p>75% of faculty demonstrate fluency in their use of instructional methods that foster higher order thinking skills.</p> <p>75% of faculty design and use assessments measuring higher order thinking skills.</p> <p>75% of faculty design and teach arts integration that specifically targets higher order thinking capacity.</p>	12-Oct
	Innovation	Extra point given at any of the above levels for innovative instructional methods of reaching the indicator.	1

Levels of Achievement, Continuum of Improvement
School Leadership, Planning, Professional Development

Creating a community of practice in which leadership is cultivated and shared at every level including all stakeholders, Principals, Teachers, Parents & students.	Level of Achievement	Indicators	Total Possible Credits = 13
<p>School leadership are actively engaged in instilling all elements of the HOT approaches in all classrooms, including fostering professional development participation in HOT Institutes and other PD.</p>	Access	<p>The school administrator(s) introduce and build a team representative of 25% of faculty that participate in a HOT Schools Institute, shape a collaborative HOT School annual plan and benchmarks, and implement collaborative instructional methods.</p> <p>25% of the school community participate in one + additional HOT professional development offering per year.</p>	3-Jan
<p>The School provides for substitute teachers so faculty can jointly plan integrated curriculum, can plan and evaluate TACs with visiting artists and faculty teams, and can develop and evaluate implementation of HOT goals.</p>	Connections	<p>The School administrator builds a team of 40% of faculty who have participated in at least one Institute and at least one additional professional development offering per year.</p> <p>The School administrator and a faculty team representing both classroom and arts instructors set annual HOT School improvement goals and benchmarks for accomplishment.</p> <p>The School administrator introduces the HOT Schools approach and methods to parents through various communication approaches, and establishes a parent group that is active in HOT School improvement and planning.</p>	6-Apr

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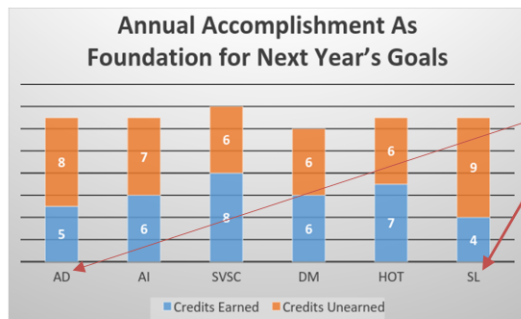
	Correlations	<p>The School administrator builds a team of 60% of faculty that attend at least one HOT Institute, one additional HOT Schools professional development offering.</p> <p>The School administrator observes and provides feedback and assists goal setting for 60% of faculty related to HOT Schools goals as set by the school.</p> <p>The school administrator works collaboratively with faculty to provide opportunities for cultivating student leadership.</p> <p>The School administrator represents the HOT Schools program in dialogue with district and state educational leadership.</p>	9-Jul
	Mastery	<p>The school administrator(s) observes and assists all faculty in setting and reaching individualized HOT instructional plans.</p> <p>The HOT School plan as developed and implemented by the school accomplishes tangible, sequential/continuum progress for all HOT Schools and Approach.</p> <p>School policies and culture support the school as an on-going HOT School fully committed to implementation of all HOT Approach.</p>	12-Oct
	Innovation	Extra point given at any of the above levels for innovative instructional methods of reaching the indicator.	1

RECOGNITION LEVELS ALONG THE CONTINUUM

- **Bronze** credits. 20% minimum credits per each of the six categories, or three to four credits per category, total range of 18 to 29
- **Silver** 35% minimum credits per each of the six categories, or five to six credits per category, total range of 30-41 credits.
- **Gold** credits. 50% minimum credits per each of the six categories, or seven to nine credits per category, total range of 42-59
- **Platinum** 75% minimum credits per each of the six categories, or ten + credits per category, total of 60-78 credits.
 - Access Level School is a school that is Bronze in four or more categories.
 - Connections level school is a school that is Silver in three or more categories; bronze in three or less categories; and up to one gold category.
 - Correlations level school has a mix of silver and gold categories, no bronze. A highest level Correlations school has all gold categories.
 - Mastery level school must have three or more categories at Platinum, no more than two at Gold, no silver or bronze.

Scoring Example

Category	Maximum Possible Credits	Credits Earned	Innovation Credit Earned	Credits Unearned
Strong Arts Discipline	13	5	0	8
Arts Integration	13	6	0	7
Student Voice, Choice, Participation, Responsibility	13	8	1	6
Democratic Practice: School Culture & Climate	13	6	1	6
Higher Order Thinking Capacity Development	13	7	1	6
School Leadership, Planning, Professional Development	13	4	0	9
TOTAL	78	36	3	42
TOTAL ALL		39, SILVER CONNECTION LEVEL		



A HOT school and Coach review their credits per category and focus on areas where scores are lowest in order to set goals and design professional development. In this example, the school needs to strengthen its capacity in the arts taught as disciplines and in school leadership and planning. Focusing on capacity in these will move the school toward a gold level Correlation School.

Appendix O – HOT Schools Analysis and Program Evaluation Study

(This serves as the title page to the evaluation study that begins on the next page.

While some figures and tables have been modified in size to fit margin requirements, the content has not been altered.)

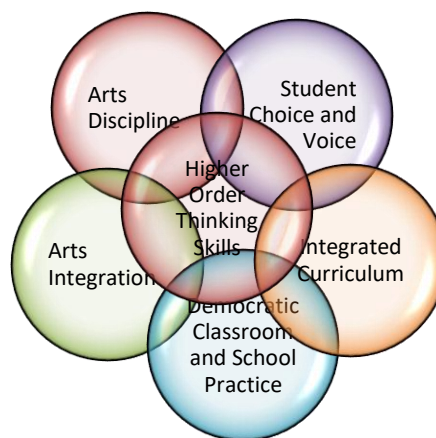
HAPPY STUDENTS & VIBRANT SCHOOLS: HOW HIGHER ORDER
THINKING, THE ARTS, & STUDENT VOICE IMPROVE SCHOOLS: An analysis and
program evaluation study of the Connecticut HOT Schools as an approach to whole
school improvement.

by Louise K. Stevens, Program Evaluator

Executive Summary

This report evaluates how the HOT Schools Program has evolved and grown into a nationally unique approach to school improvement. Over the past 23 years, the HOT Schools Program has directly impacted over 160,000 students K–12 enrolled in Connecticut public schools, including magnet and charter schools. It has provided professional development for nearly 12,000 educators and for 400 teaching artists, placing them in 48 school communities in 40 municipalities.

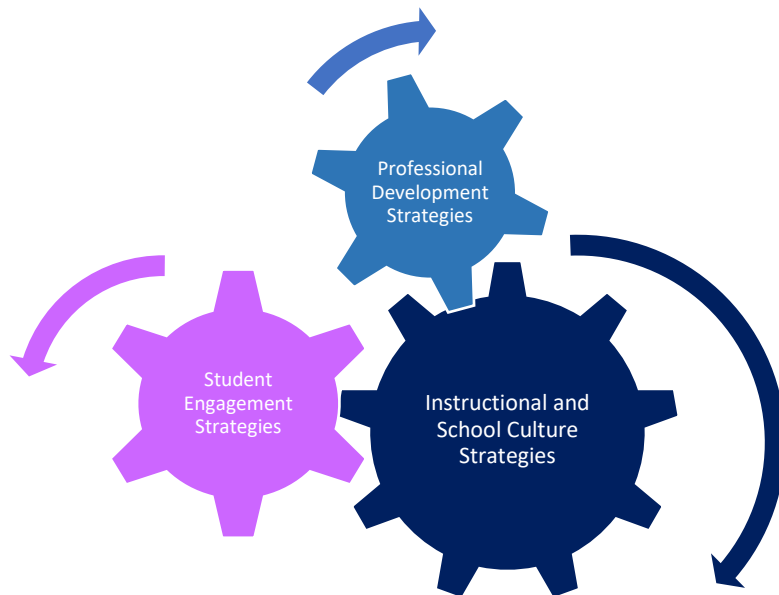
While the program has three defined core components – Strong Arts, Arts Integration, and Democratic Practice, the evaluation found that the HOT Schools Program’s uniqueness is in its simultaneous use of six instructional approaches, blended together so that each supports the other, with the cultivation of higher order thinking skills as central. These six approaches are deeply embedded into each school community, and each HOT School develops capacity in these in stages from point of entry into the program through to a level of exemplary practice. In an exemplary HOT School, 75% or more of the faculty have been trained and are fluent in mixing all of these approaches to further student achievement.



The evaluation found that HOT Schools is a whole school improvement approach, brought about through professional development that leads to change in instructional practice and improvement in school culture for instructors and students. This in turn leads to enhanced student engagement across subjects.

HOT Schools develop annual plans for deepening capacity in each of the above instructional approaches. In Exemplary Level HOT Schools, school principals build school-wide leadership teams that do collaborative planning and that often teach collaboratively and work extensively with visiting teaching artists. These teams are

always comprised of the schools' arts instructors (which the program refers to as arts classroom teachers) as well as non-arts classroom teachers. Parents are invited to take an active role as well. HOT Schools portfolio of approaches fall into three primary categories:



The Professional Development Strategies include:

- Coaching and Planning Counsel;
- Leadership Network;
- Five Day Summer Institute;
- Mini Institutes;
- Leadershops;
- Peer Workshops;
- Peer Partner Workshops;
- Teaching Artist Mentoring;
- School to School Mentoring;
- Optional Services.

The Instructional and School Culture Strategies include:

- The Becoming HOT Continuum of Practice Development;
- Higher Order Thinking Skills Development;
- Annual Planning for School Improvement;
- Exposure and Hands on Arts Experiences for Teachers and Administrators;

- Principals as Instructional Leaders;
- Classroom and School Wide Celebration of Student Voice, Student Choice;
- Collaborative Teaching;
- Teaching Artist Collaborations (TACS);
- HOT Blocks Co-Teaching Between Arts Instructors and Classroom Teachers;
- Enhanced Curricular HOT Opportunities (ECHOS);
- Arts Integrated Lessons and Units Across Curriculum;
- Sequential Arts Discipline Instruction;
- Collaboration with Cultural Organizations.


The Student Engagement Strategies include:

- Magical Mailbox Student Generated and Operated Repository for Creative Work;
- Exhibited Student Work, Welcome Chorus, Whole School Murals, Living Bulletin Boards;
- Student Peer Review Boards;
- Student Senate/Governance;
- Town Meetings Presentation of Student Work;
- Cultural and Arts Field Trips;
- Parent Partners.

HOT Schools support the national core arts standards by aligning practices to support each standard.

National Core Arts Standards Artistic Processes and Anchor Standards			
Artistic Processes			
<p>Creating</p> <p><i>Definition: Conceiving and developing new artistic ideas and work.</i></p>	<p>Performing/Presenting / Producing</p> <p><i>Definitions: Performing: Realizing artistic ideas and work through interpretation and presentation.</i></p> <p><i>Presenting: Interpreting and sharing artistic work.</i></p> <p><i>Producing: Realizing and presenting artistic ideas and work.</i></p>	<p>Responding</p> <p><i>Definition: Understanding and evaluating how the arts convey meaning.</i></p>	<p>Connecting</p> <p><i>Definition: Relating artistic ideas and work with personal meaning and external context.</i></p>
Anchor Standards			
<p><i>Students will:</i></p> <p>1) Generate and conceptualize artistic ideas and work.</p> <p>2) Organize and develop artistic ideas and work.</p> <p>3) Refine and complete artistic work.</p>	<p><i>Students will:</i></p> <p>4) Select, analyze, and interpret artistic work for presentation.</p> <p>5) Develop and refine artistic techniques and work for presentation.</p> <p>6) Convey meaning through the presentation of artistic work.</p>	<p><i>Students will:</i></p> <p>7) Perceive and analyze artistic work.</p> <p>8) Interpret intent and meaning in artistic work.</p> <p>9) Apply criteria to evaluate artistic work.</p>	<p><i>Students will:</i></p> <p>10) Synthesize and relate knowledge and personal experiences to make art.</p> <p>11) Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.</p>
HOT School Program Focus: Primary Method Implementing Each Anchor Standard			
<p><i>Professional Development</i></p> <p>Enhancing teaching methods for arts instructors; raising the significance of the arts instructors in the school community.</p> <p><i>Program Continuum:</i></p> <p>Maximize studio time: meet or exceed State arts and music instructional time standards.</p>	<p><i>Professional Development</i></p> <p>Enhancing teaching methods for both arts instructors and classroom teachers.</p> <p><i>Instructional Practice:</i></p> <p>Co-teaching (HOT Blocks); equal emphasis on informance (process) and performance.</p> <p><i>Student Engagement:</i></p> <p>Exhibited Student Work; Student Arts Boards; Magic Mailbox, Town Meetings.</p>	<p><i>Professional Development</i></p> <p>Advanced application of consistent learning methods across curriculum, linking higher order thinking skills to the arts curriculum.</p> <p><i>Instructional Practice:</i></p> <p>Full use of Teaching Artist Collaborations (TACs).</p> <p><i>Student Engagement:</i></p> <p>Student Art and Literary Boards.</p>	<p><i>Professional Development</i></p> <p>Use of authentic arts integration across curriculum; equity of arts education in well-rounded education.</p> <p><i>Instructional Practice:</i></p> <p>Transfer from TACs to other units/topics by instructors and students.</p>

HOT Schools have established standards of practice that students learn through the HOT methods. In addition to meeting the national core arts standards, these enable schools to effectively meet the Common Core Standards across curricula.



CORE HOT SCHOOLS STANDARDS	Common Core Standards Math	Common Core Standards ELA	Common Core Standards Science	Common Core Standards World Languages	Common Core Standards Social Studies
HOT school students use higher order skills to shape compelling questions and design processes for solving problems.	Make sense of problems and persevere in solving them.	Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.	Ask questions and define problems.	Demonstrate comprehensive of content from authentic audio and visual resources.	Individually and with others, students develop compelling and supporting questions; explain why each compelling question is important and make connections between supporting questions and compelling questions.
HOT school students use higher order thinking skills of analysis and synthesis.	Reason abstractly and quantitatively .	Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	Develop and use models.	Examine, compare and reflect on products, practices, and or perspectives of the target culture(s).	Determine the types of sources that will be helpful in answering compelling and supporting questions, taking into consideration multiple points of view represented in the resources.
HOT school students learn how to evaluate and critique reasoning, written work, concepts and ideas across subjects.	Construct viable arguments and critique the reasoning of others.	Analyze how and why individuals, events, and ideas develop and interact over the course of a text.	Plan and carry out investigations .	Acquire information from other content areas using authentic sources.	Understand the important institutions of society and the principles that these institutions are intended to reflect, based on mastery of a body of knowledge about law, politics, and government.

HOT school students use arts integration methods and skills to interpret work, derive meaning, analyze and model.	Model with mathematics.	Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.	Analyze and interpret data.	Derive meaning from expressions found in culturally authentic texts; understand the purpose of a message and point of view of its author; identify the distinguishing features of authentic written and aural texts.	Set economic goals and identify resources available to achieve the goals, including alternative ways to use the resources, weighing the additional benefits of an action against the additional cost.
HOT school students combine collaborative and independent problem solving with artistic-creative spatial reasoning to explain.	Use appropriate tools strategically.	Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text relate to each other and the whole.	Construct explanations and design solutions.	Demonstrate knowledge and understanding of content across disciplines.	Answer geographic questions by using maps and/or geospatial representation, by gathering relevant information, organizing and analyzing the information, and using effective means to communicate the findings.
HOT school students use artistic-creative thinking to be precise, evaluate, understand points of view across subjects.	Attend to precision.	Asses how point of view or purpose shapes the content and style of a text.	Engage in argument from evidence.	Evaluate similarities and differences in language use and idiomatic expressions between the target language and one's native language.	Understand human-environmental interactions that happen both in specific places and across broad regions, including how culture influences the locations and the types of interactions that occur.
HOT school students understand and use higher order skills of evaluative and comparative questioning and	Look for and make use of structure.	Integrate and evaluate content presented in diverse media and formats, including visually and	Obtain, evaluate, and communicate information.	Evaluate similarities and differences in the perspectives of the target cultures and one's own culture(s) as	Evaluate how the size, composition, distribution, and movement of human populations are fundamental and active features on the Earth's surface.

reasoning; and artistic-creative skills.		quantitatively, as well as in words.		found in multimedia and digital/print resources.	
HOT school students use art knowledge to identify and assess reasoning, features, and changes.	Look for and express regularity in repeated reasoning.	Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.		Analyze the features of target culture communities (geographic, historical, artistic, social and/or political).	Describe changes in the physical and cultural characteristics of the world's regions.
HOT school students combine higher order thinking skills of analysis and interpretation with artistic-creative skills of comparing approaches and understanding context.		Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.		Interpret authentic written and aural texts within the communities of the target language.	Assess similarities and differences between historical periods and between the past and present, including the interrelation of patterns of change, understanding the context within which events happened.
HOT school students effectively present information, concepts, and ideas to audiences in both written and oral presentation; summarize and develop original creative work to retell and persuade reflecting point of view.		Read and comprehend complex literary and informational texts independently and proficiently.		Present information, concepts, and ideas to an audience of listeners or readers on a variety of topics; produce a variety of creative oral and written presentations; retell or summarize information in narrative form, demonstrating a consideration of audience; create and give	Demonstrate historical understanding through recognizing the multiple points of view in the past and using a range of sources on any historical question. Use written documents, objects, artistic works, oral accounts, and landscapes to answer historical questions, paying attention to the wider historical context, to draw conclusions about probably causes and effects.

				<p>persuasive speeches and write persuasive essays, produce expository writing.</p> <p>Demonstrate understanding of the nature of language through comparisons of the language studied and one's own.</p>	
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In meeting Standards across curriculum, HOT Schools also propel schools seeking to strengthen their integrative Science, Technology, Engineering Arts and Math (STEAM) achievement, furthering learning in science and math through arts. This Venn Diagram shows how HOT standards specifically address all of the science and math standards, a further visualization of the above table.

HOT Schools teach STEAM through the arts as core curricula, through arts integration and through focus on Higher Order Thinking

Math Learning: Advanced Through HOT Skills.

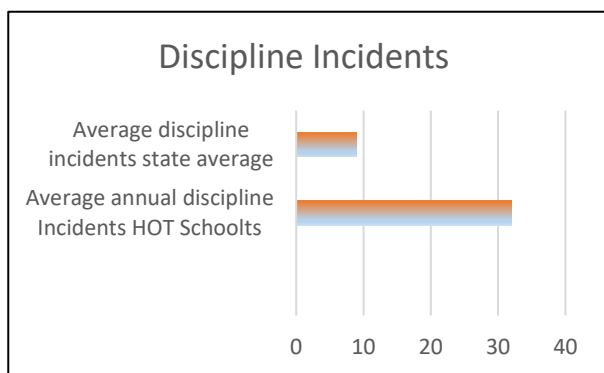
ELA Standards: Addressed Via HOT Methods.

Science Learning: Advanced through HOT Skills.

Teachers in HOT Schools professional development gain fluency in teaching math and science through arts integration and through standards-based arts discipline instruction. A 2011 research study from the University of California Berkeley together with Harvard University Graduate School of Education¹ found that at the collegiate level, art students performed far better in geometric reasoning than any other group. HOT Schools offers a number of sequential learning tracks during its annual institute that focus on the use of art learning to advance geometric reasoning as well as scientific reasoning and visualization.

Results

HOT Schools enter the program primarily out of need for improvement and/or out of philosophical alignment to the HOT Schools core philosophy. The majority of HOT Schools serve a higher proportion of high needs students than average in Connecticut. Class sizes are typically larger than average, and there are often high numbers of discipline issues. These are largely challenged school communities that have attempted turn around through other approaches before choosing the HOT methods.



The following tables² show the interesting story of HOT Schools.

Table 1. (Left) shows that the current group of 16 HOT Schools are challenged by high levels of student disciplinary issues. Many of these are urban schools with substantial

¹ Visual Thinking: Art Students Have an Advantage in Geometric Reasoning, by Caren M. Walker, Ellen Winner, Louis Hetland, Seymour Simmons, and Lynn Goldsmith. UC Berkeley, Boston College, Harvard Graduate School of Education, Massachusetts College of Arts and Design, Winthrop University, EDC, Newton, MA. In Scientific Research, DOI 1-.4236/ce.2011:21004

² These tables were developed using school-specific data from the Connecticut Next Generation Accountability System, a set of 12 indicators that help tell the story of how well a school is preparing its students for success in college, careers, and life. The system was developed to move beyond test scores and graduation rates alone to provide a more holistic perspective and to track student improvement over time. The indicators include academic achievement, academic growth, assessment participation rates, chronic absenteeism, four-year and six-year cohort graduation rates, physical fitness and (to be added) arts access.

proportions of high needs students, and almost all of the HOT School participants entered HOT Schools specifically because they are schools that are somewhere on the challenged-to-crisis continuum.

Table 2. (Below) shows that HOT Schools at all grade levels, starting in Kindergarten, have more overcrowding issues than other schools. Instructors in HOT Schools have as many as eight more students per class than their peer teachers elsewhere in the state. Typically, crowded classrooms are those with higher levels of student absenteeism and chronic absenteeism seen when students fall through the cracks and lose interest.

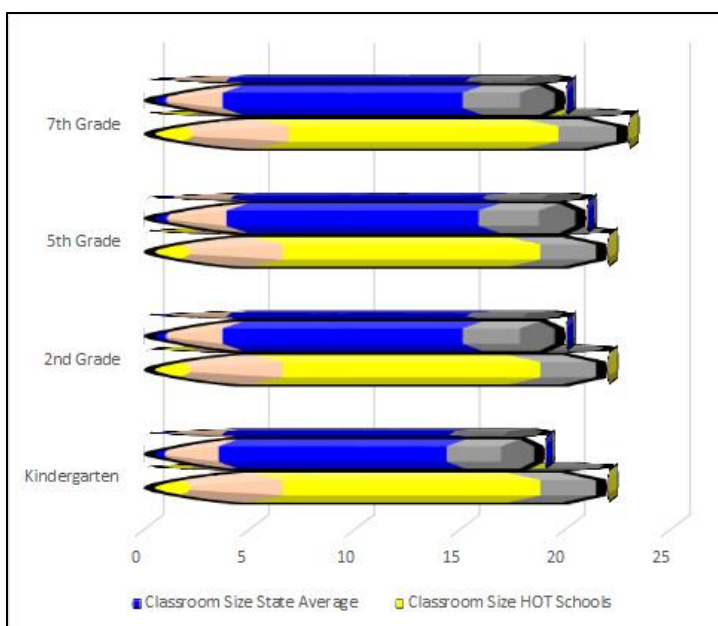


Table 3. and 3.A. (Below) Remarkably – given this profile - HOTS School students come to school. Even given the high level discipline issues in HOTS Schools, per above, absenteeism is down dramatically among the HOTS schools, and is subtly down among all HOTS Schools as compared to state average. High needs students in both the HOTS schools and even the newest of HOTS Schools also have significantly fewer absent days than their peers in schools that aren't HOTS.

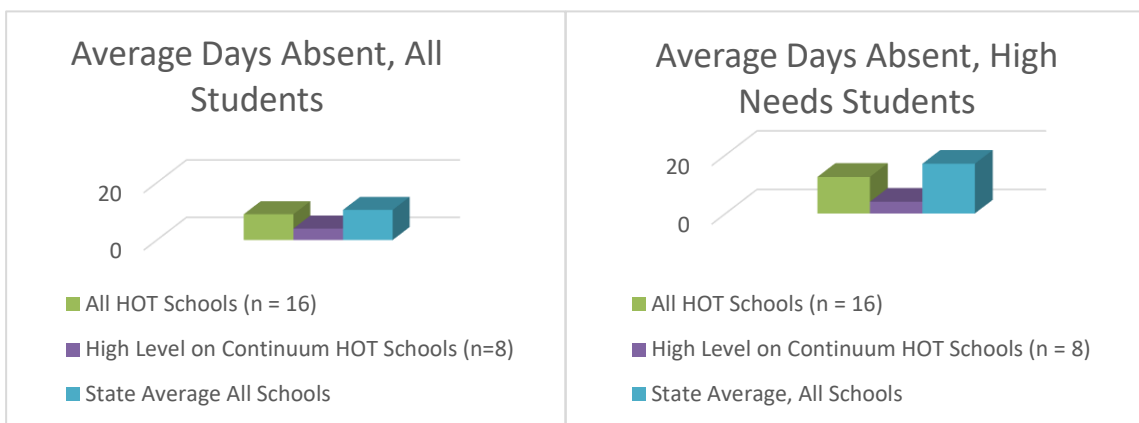


Table 3.

Table 3.A.

Table 4. This high level of engagement places HOTS School students on track for high school graduation *as assessed by their teachers and school administrators*. Eighty-eight percent of all HOTS School students are on track for high school graduation, as compared to 85.5% of all students statewide.

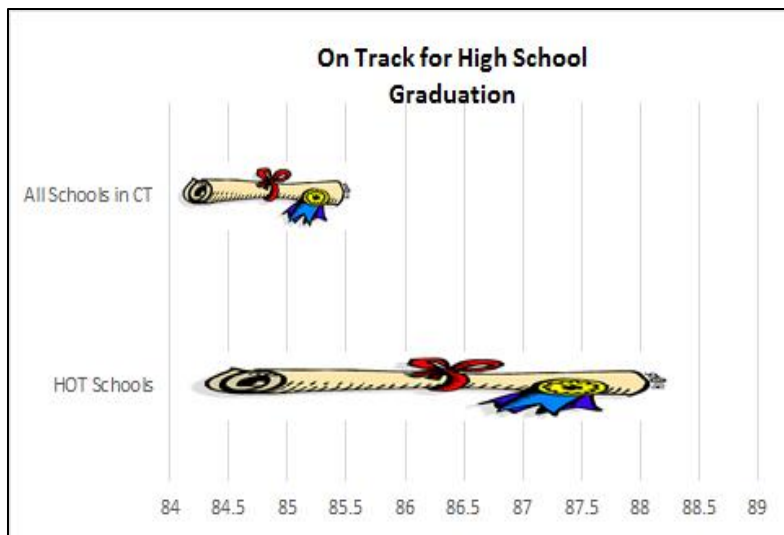
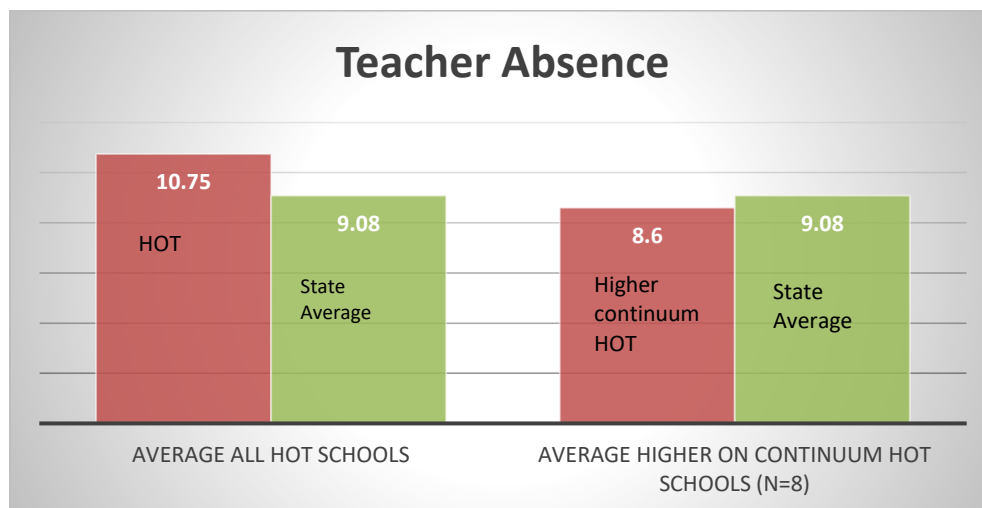


Table 5. Overall, HOT Schools far outpace the balance of Connecticut Schools – despite the challenging nature of these schools. When all of the state accountability indicators are added up, HOT Schools average 16% higher for the aggregate of all indicators than other schools in Connecticut.



Table 6. Perhaps one of the reasons students in HOT Schools do better than their statewide peers is that faculty among the HOTEst schools are highly engaged. While teachers absences in all HOT Schools exceeds the State average of all schools, among the eight most invested of the 16 HOT Schools in the sample, teacher absenteeism is below the state average.



HOT Schools have incorporated teaching methods and school culture approaches that have made it possible for them to succeed at significant levels. This is evident in drill downs from the state accountability indicators, showing how students in HOT Schools perform in ELA, Math and Science.

This level of engagement fosters learning evident in multiple subjects. This study evaluated the scores of students in HOT Schools as a whole and those from the HOT Schools that are at the higher levels of the HOT Continuum. Table 7. (Below, Left) Math Scores of students in high-continuum HOT Schools are consistently nine points higher than the state average for all students.

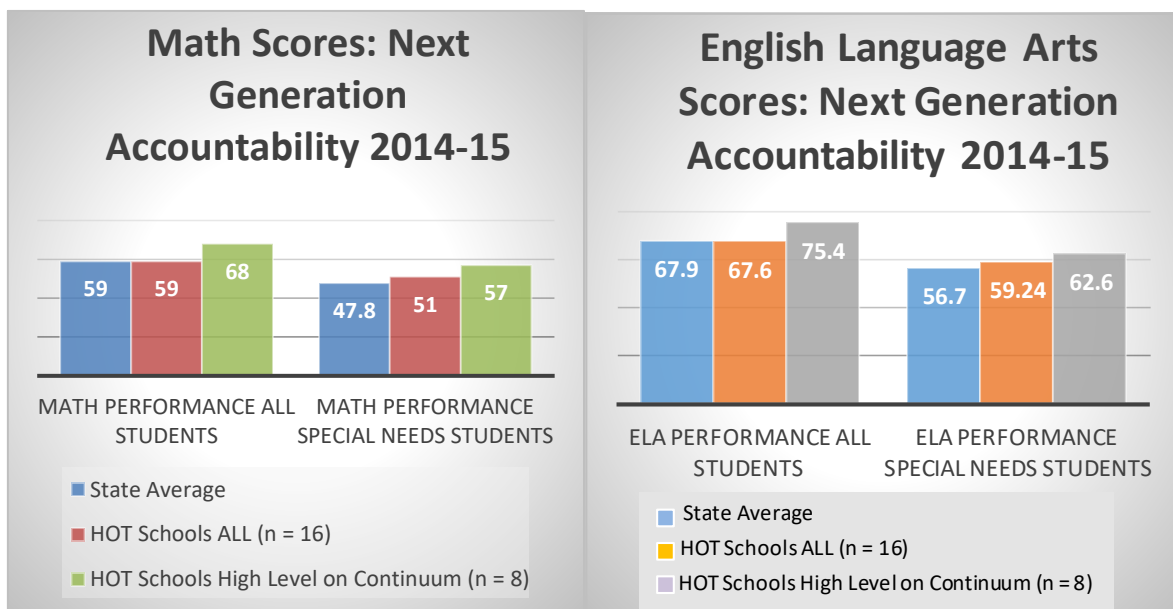
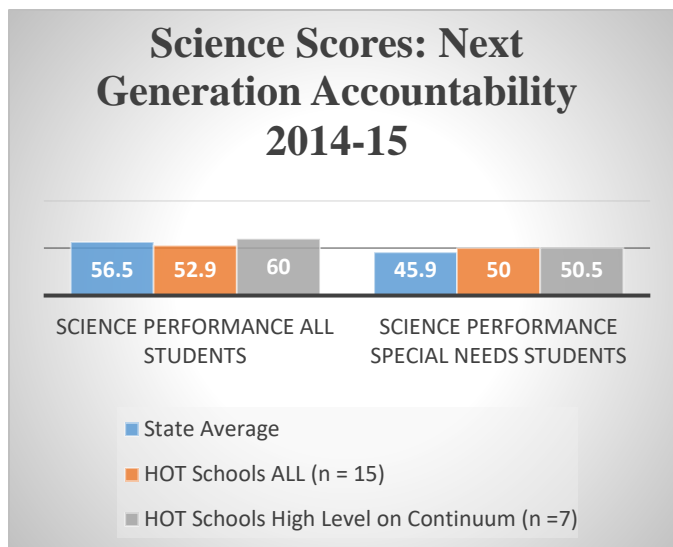


Table 8. (Above, Right) Shows English Language Arts scores are seven and a half points higher.

Table 9. (Below) Shows that science scores are four points higher.



Evaluator Summary Recommendations

1. The HOT Schools Program should become the HOT Schools Center (or similarly named) as either an academic center housed in a university or as a Center of Practice working under the umbrella of a Regional Education Service Center (RESA) or similar type of entity. This should be used as a means of expanding the number of HOT Schools; expanding resources through grant funding from multiple sources and through contracted partnerships; expanding the opportunity for academic research assessing the efficacy of the HOT approaches and their application in diverse schools, and expanding administrative staff.
2. The Exemplary Practice Continuum of this report (addendum to the evaluation) recommends that to reach Exemplary Practice level, 60% of a HOT School's faculty should have attended at least one institute in a three-year period. Optimal school benefit is seen when 60% of a school's faculty have attend the HOT Schools Summer Institute for three years: schools that are at the Correlation and Exemplary Practice Levels sent teams for three years. But this will become harder to accomplish: Connecticut has revised its professional development so that rather than 90 hours per five years (which encouraged teachers to meet the PD requirement by attending two full institutes within any five-year period) teachers now need 18 hours *per year*.

Thus, restructuring the Institute into 18 hour packages to encourage multi-year participation can attract teachers who now have less incentive to meet all their PD requirements with repeat Institutes.

3. Faculty, administrators, and teaching artists who have moved through several institutes and additional professional development and who have achieved fluency in use of HOT Schools instructional methods should receive acknowledgement for their accomplishments, through certification and award levels for participating HOT Schools.
4. Create a brand identification and certification of HOT Schools core faculty.
5. Establish a single set of simple, consistent metrics that schools, coaches, teaching artists and HOT Schools program administrators can use to evaluate the progress of schools through the HOT Continuum. (See Addendum for model). Streamline all information collection based on the metrics.
6. Establish a national/international advisory committee to review practices and recommend best practices. Establish a working Community of Practice committee representative of: administrators, HOT Schools arts classroom and non-arts classroom teachers, teaching artists, coaches, and core faculty to meet twice per year advising and refining methods and techniques.

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CERTIFICATIONS

Music K–12, Instructional II, Pennsylvania and New Jersey

Classroom K–8, New Jersey

Kodaly Level III, Westminster Choir College, Princeton, NJ

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EMPLOYMENT

North Penn School District, Lansdale, PA 2001 – 2015

Vocal, General, and Instrumental Music

Clinton Township School District, Lebanon, NJ 1998–2001

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Vocal and General Music (sabbatical leave substitute)

Centennial School District, Warminster, PA 1993–1997

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AWARDS AND SCHOLARSHIPS

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