

EVALUATING THE EFFECT OF AN ONLINE JOB-EMBEDDED PROFESSIONAL
DEVELOPMENT PROGRAM ON ELEMENTARY TEACHERS' USE OF ARTS
INTEGRATED APPROACHES TO LEARNING IN A SOUTH TEXAS SCHOOL
DISTRICT

A Record of Study

by

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ABSTRACT

In the state of Texas, instruction in the arts is required from Kindergarten through eighth grade. In many cases, the responsibility for teaching these subjects falls on the classroom elementary teacher despite limited knowledge, experience, and a low sense of self efficacy. This study examined how an online professional development program affected elementary teachers' use of arts approaches, the attitudes and issues that have a bearing on the use of arts approaches, and teacher learning that occurred as a result of engaging in an online professional development program.

An embedded mixed methods design was used that embedded a qualitative case study within a quantitative study in order to compare and corroborate the quantitative findings. Participants, employed at an elementary campus in South Texas, consisted of seven elementary generalist teachers who participated in an eight week online professional development program and six teachers who volunteered to complete a survey only. The central question, "how does an online job-embedded professional development program affect elementary teachers' beliefs about and use of arts integrated approaches to learning," guided the study.

Seven sources of both quantitative and qualitative data were collected over a ten week period. Themes that emerged from the qualitative data analysis were student outcomes, teacher-efficacy, and external factors. Findings indicate that (1) online formats are a viable form of professional development, (2) a lack of time to plan most significantly impacts the use of arts approaches, and (3) improved access to rich, arts based lesson resources may increase the use of arts in the classroom. This study was

significant because it provided insight into the quality of teacher learning and its impact on classroom practice as the result of online professional development.

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CHAPTER I

INTRODUCTION

Over the last two decades, advances in learning theory and a growing body of research suggest that the arts play a critical role in student academic achievement and learning (Burnaford, Aprill, & Weiss, 2001; Catterall, Chapleau & Iwanaga, 1999; DeMoss & Morris, 2002; Fineberg, 1992; Grafton and Cross 2008; Rabkin & Redmond, 2006; Wandell, Dougherty, Ben-Shachar, Deutsch, & Tsang, 2008). Instruction in the arts has been positively correlated to academic gains in reading and mathematics (Catterall, 1998; Catterall et al., 1999; Gullatt, 2008; Luftig, 1994); higher SAT scores (College Board, 2007); the development of higher order thinking skills (Burton, Horowitz, & Abeles, 2010; DeMoss & Morris, 2002; Fineberg, 1993); improved attitudes towards school (Smith, Brandon, Lawton, & Krohn-Ching, 2010); and a greater motivation for learning (DeMoss & Morris, 2002; Eisner, 2002)

Concern about student access to quality arts programs has prompted action at both the national and state level (Parsad & Spiegelman, 2012). National standards for the arts were developed in 1994 and the *No Child Left Behind Act of 2001* included the arts as a core academic subject. In the state of Texas, Senate Bill 815 (2003) mandated that Texas school districts provide instruction in all of the required curriculum, including both foundational and enrichment subject areas. This meant that at the elementary level, in addition to the four foundational content areas of English Language Arts/Reading, mathematics, science, and social studies, school districts had to offer art, music, theatre,

languages other than English, health, physical education, and technology applications at each grade level.

While the arts are important as subjects in their own right (Eisner, 1998), they can also be used as enticing entry points or to enhance learning in other academic disciplines (Gullatt, 2008). This process, commonly referred to as *arts integration*, is described by researchers as teaching *through* or *with* the arts to help students form powerful curricular connections (Burnaford, Brown, Dougherty, & McLaughlin, 2007). Arts integration offers teachers a range of instructional strategies that can help meet the needs of diverse learners (Catterall et al., 1999; Eisner, 2002; Garrett, 2010; Mason, Thorman, & Steedly, 2004; Rabkin & Redmond, 2004) and encourage creativity, risk-taking, and the development of problem solving skills (Wakeford, 2004). Through effective arts integrated strategies, teachers can teach the arts while enhancing learning in other academic disciplines as well (Burnaford et al., 2001; Catterall & Waldorf, 1999; Rabkin & Redmond, 2006).

Unfortunately, most teachers are unprepared to teach using arts integrated approaches (Garvis & Pendergast, 2010; Russell & Zembylas, 2007). Powell (2001) suggests that this is due to teachers' limited arts background, knowledge, or experience. A study (Oreck, 2004) on the use of the arts in teaching found that while teachers believed the arts were important to student learning, they rarely used arts strategies. The greatest factor influencing the use of arts in teaching was teachers' self-efficacy related to creativity and artistry (Oreck, 2004). Participating teachers expressed the need for

professional development to improve their knowledge and expertise in artistic techniques (Oreck, 2004).

The need for professional development is even more critical in light of recent budget cuts that have resulted in the elimination of many certified arts specialists at the elementary level, particularly in the areas of visual arts and drama. Between 1999-2000 and 2009-2010, public elementary schools offering visual arts declined from 87% to 84% overall and only 84% of those offering visual arts employed an arts specialist (Parsad & Spiegelman, 2012). Similarly, public elementary schools offering drama instruction declined from 20% to only 4 % over the same period and, of those, only 42% were taught by an arts specialist (Parsad & Spiegelman, 2012). Unfortunately, when no content specialist is available, the responsibility for teaching the arts falls solely on the elementary generalist teacher (Oreck, 2004). In these cases, the need for professional development is dire. Teachers must be afforded the knowledge and skills necessary to implement quality arts instruction through effective professional development.

In the design of arts professional development models, however, it is essential to understand the factors that may influence a teacher's use of the arts and arts instructional strategies (Oreck, 2004). Does a teacher's attitude or previous experience in the arts affect their use of the arts in the classroom? How do school and administrative support or the pressure of teaching the tested curriculum impact arts instruction? What types or modes of professional development are effective methods for teaching arts integration?

While many arts integration studies have addressed student learning outcomes (Burnaford et al., 2001; Burton et al., 2010; Catterall, 1998; Catterall et al., 1999;

DeMoss & Morris, 2002; Eisner, 2002; Fineberg, 1993; Grafton and Cross 2008; Luftig, 1994; Rabkin & Redmond, 2006; Smith et al., 2010; Wandell et al., 2008), few have examined models of arts integrated professional development (Burnaford et al., 2001; Garret, 2010; Oreck, 2004) and no evidence was found of studies examining an online model for teacher learning in the arts. This study explored an online job-embedded model of professional development in arts integration within the Public Independent School District (PISD). PISD is a pseudonym used to protect the identity of the actual school district, campus, and participants. Through the use of online modules, this study attempted to add to the body of knowledge regarding arts integration and online job-embedded professional development. Job-embedded professional development is teacher learning that is conducted predominantly within the confines of the teacher's workday and is grounded in actual classroom practice (Croft, Coggsell, Dolan, Powers, & Killion, 2010). Since teachers can engage in web-based learning when and where it is convenient and needed (Dede et al, 2009; Rasmussen, 2008; Yang & Liu, 2004) it follows that an online format would be an appropriate tool for teacher learning within a job-embedded approach.

Statement of the Problem

The PISD, located in the southern most region of Texas, employs degreed and certified specialists in all of the arts disciplines at the secondary level. At the elementary level, however, the PISD only provides content specialists in music. As a result, the elementary classroom teacher is responsible for teaching visual art and drama along with the foundational curricula. In addition, the PISD recently became an International

Baccalaureate (IB) district. As an IB District, all 20 elementary schools must receive individual accreditation as IB World Schools. Currently, all elementaries are in various stages of the IB Primary Years Program (PYP) accreditation process.

The PYP curriculum framework requires that students use the subject areas of language, social studies, mathematics, science, the arts, and personal, social, and physical education to explore six transdisciplinary themes through integrated units of inquiry. To receive accreditation, teachers must show evidence that they have developed and implemented a minimum of four units of inquiry each school year. These units must incorporate elements of all six-subject areas including the arts and arts integrated activities or assessments

Research indicates that elementary teachers are generally unprepared to teach the arts and rarely use arts integrated strategies in the classroom due to a low sense of self-efficacy (Garvis & Pendergast, 2010; Oreck, 2001; Powell, 2001; Russell & Zemblayas, 2007). As a result, PISD educational leaders are emphasizing the need for elementary teachers to receive professional development in the arts and arts integrated instructional practices.

Along with the emphasis for training in arts integrated instruction, the PISD is stressing that professional development be job-embedded. Currently, the PISD employs a workshop model for professional development that has been predominantly ineffective at producing real teacher change. The workshop model also demands teachers spend excessive amounts of time outside the school day and on Saturdays attending required training. It is the goal of the district that teachers spend very limited amounts of time in

training outside of the school day. Unfortunately, however, the need for training staff across disciplines is vast and the PISD currently lacks a practical method for implementing a job-embedded professional development program.

Purpose of the Study

This study employed a mixed-methods approach to explore how an online professional development program affected PISD elementary teachers' use of arts integrated approaches to learning. The study simultaneously added to the district's understanding for using web based approaches in a job-embedded professional development model. The information gleaned from the study provided both summative and formative data for the district to evaluate and improve the overall professional development program. This study specifically explored the use of online modules as a medium for arts based professional learning within a job-embedded approach.

Research Questions

The central question, "how does an online job-embedded professional development program affect elementary teachers' beliefs about and use of arts integrated approaches to learning," guided this study. Additional study questions consisted of:

1. What attitudes and beliefs related to the use of arts approaches in teaching can be identified and interpreted from teachers' responses on the Teaching With the Arts Survey (TWAS) (Oreck, 2004)?
2. What is the effect on teacher self-efficacy for teaching the arts after engaging in an online professional development program?

3. How are teachers' knowledge and understanding of arts integration practices affected by using an online professional development program?

Significance of the Study

The following three implications of this study attempted to add to the body of knowledge in both the areas of arts integration and online professional development. First, while many arts integration studies have addressed student learning outcomes, more data is needed on the transfer of arts integrated professional development to teacher practice (Burnaford et al., 2007; Garret, 2010; Oreck, 2004) and on practical models for arts integrated professional development (Burnaford et al., 2001; Garret, 2010; Oreck, 2004). This study will contribute to the body of knowledge on arts integration and teacher professional development by exploring how an online job-embedded professional development program affected teacher implementation of arts integrated practices within the PISD.

Second, while the PISD is stressing the need for all professional development to be job-embedded, there is a relatively little understanding regarding its practical implementation. This study explored a model for web-based job-embedded teacher professional development program in the PISD.

Finally, a review of the literature revealed that a majority of evidence supporting the effectiveness of online platforms for teacher professional development was largely anecdotal (Barbera, 2004; Dede et al., 2009; Solimeno et al., 2008). While many studies showed little to no difference between online and face-to-face learning (Russell, 2001), most used only self-reported surveys or objective examinations as their data sources

(Lebec & Luft, 2007). Very few studies attempted to assess conceptual learning through the use of both quantitative and qualitative data (Windschitl, 1998). This study attempted to improve on previous methodology by using a mixed methods approach. The use of both quantitative and qualitative data to examine the research questions are expected to provide deeper insight into the quality and nature of teacher learning and its potential impact on classroom practice as the result of engaging in an online professional development program.

Glossary of Terms

Arts – The term *arts* is generally used to encompass the four arts disciplines of visual art, theater arts/drama, music, and dance.

Arts integration – A review of the literature reveals that researchers have struggled to come to consensus on a common definition and theory of practice for arts integration (Parsons, 2004). Arts integration is generally referred to a teaching approach that builds a set of relationships between the elements and concepts of music, dance, visual or theater arts and other academic disciplines (Deasy, 2003). For the purpose of this study, the term arts integration will build on the work of Whitesett and Franklin (2011) and define arts integration as “an approach to teaching and learning that connects elements and concepts of arts disciplines to those of other academic subjects, with a goal of increasing knowledge, understanding, and appreciation of both academics and the arts” (p. 3).

C-Scope – CScope is an online curriculum management system that includes a curriculum framework for grades Kindergarten through twelve in all foundational

subject areas based on best practice models. All content, including curriculum components, resources, and assessments are aligned to the Texas Essential Knowledge and Skills (TEKS) and designed to reflect the standards and rigor addressed on state assessments (Texas Education Service Center Curriculum Collaborative, 2010).

Enrichment subject – The term enrichment refers to the subjects of art, music, theatre, languages other than English, health, physical education, and technology applications.

Foundational subject– The term foundational is used to refer to the four academic disciplines of English language arts/reading, Mathematics, Social Studies and Science.

IB –The International Baccalaureate was founded in Geneva, Switzerland in 1968 as a diploma program for internationally mobile students. Since 1994, the IB has expanded to include the Middle Years and Primary Years Programs (PYP) and now serves students ages three to nineteen (International Baccalaureate Organization, 2012).

PYP – The Primary Years Program is an IB curriculum model for students’ age 3 to12. The PYP is an all-school inclusive curriculum model that promotes inquiry-based instruction arranged within six transdisciplinary themes: who we are; where we are in time and place; how we express ourselves; how the world works; how we organize ourselves; and sharing the planet (International Baccalaureate Organization, 2012).

Job-Embedded - The job-embedded professional development (JEPD) model can be defined as teacher learning that is grounded in teaching practice and designed to enhance teachers’ content specific instructional practice (Croft et al., 2010). A characteristic of the model is that most of the teacher learning occurs within the confines of the school day (Croft et al., 2010). Designs for JEPD include mentoring, coaching, lesson study,

action research, peer observation, examining student work, professional learning communities and study groups (Crofft et al., 2010).

Professional Development – The term professional development refers to on-going learning opportunities provided for teachers by the school district.

PISD – Public Independent School District (PISD) is a pseudonym. The name of the actual school district participating in this study has been changed to protect the district, campus, and participant's identities.

Public Elementary School #10 – Public Elementary School #10 is a pseudonym. The name of the actual campus participating in this study has been changed to protect the district, campus, and participant's identities.

Self – Efficacy - Self-efficacy refers to a teacher's belief in their ability to be successful with a task (Bandura, 1977).

CHAPTER II

LITERATURE REVIEW

The purpose of this study was to explore the use of an online job-embedded professional development program as a means to increase PISD elementary teachers' use of arts integrated approaches to learning. This study evolved from the PISD's interest in increasing teacher knowledge and use of arts integrated instructional strategies with the least amount of impact on time outside of the teacher's instructional day. The central question, "how does an online job-embedded professional development program affect elementary teachers' beliefs about and use of arts integrated approaches to learning," guided this study.

The scope of this project was wide as the researcher created the online professional development modules in arts integration and assessed their effect on teacher practice. As such, the review of the research addresses multiple topics including learning in the arts, as well as professional development. This literature review presents some of the major ideas in the literature on the following topics: Historical Context for Arts Integration, Arts Integration and its Impact on Learning, Arts Integration and Theories of Practice, The Elementary Generalist and Arts Integration, Teacher Self-Efficacy, Teacher Self-Efficacy and Arts Integration, Professional Development and Changes in Teacher Practice, Job-Embedded Professional Development, and Online Professional Development. The literature review also contains background information on the study's context.

Historical Context for Arts Integration

Origins to 1940

Throughout the history of public education, the arts have struggled to establish a place within the mainstream curriculum (Garrett, 2010). The arts were originally introduced to public education at the turn of the century as the American economy grew during the industrial revolution. Previously viewed as only for the wealthy, the arts became a curricular focus for schools as a cultural enrichment for the emerging middle class (Heilig, Cole, & Aguilar, 2010).

Between 1900 and 1930, educators began to explore theories about the way children learned and, for the first time, arts education concepts were valued for their contributions to other subject areas (Heilig et al., 2010). John Dewey (1938) theorized that children needed to have opportunities to be creative and develop critical thinking skills. He posited that arts education expanded children's perceptions about the world and developed their processes of inquiry (Heilig et al., 2010). According to Dewey, students needed to understand the interrelationships between subjects to determine how they might work together to increase understanding (Burnaford et al., 2007). These theories formed the philosophy behind progressive schools such as Horace Mann High School in Indiana (Heilig et al., 2010).

During the same period, a landmark report entitled *A Correlated Curriculum* (Weeks, 1936) was issued that suggested a combining of subject-specific, interdisciplinary, and integrated approaches to learning (Burnaford et al., 2007). This report formed the foundation for future educational theories and practices including

problem based learning, inquiry learning, and arts integration (Burnaford et al., 2007). Still, despite the work of Dewey and other progressive educational theorists of the period, the pervasive opinion remained that the arts were subjects for enrichment or only for the wealthy or talented (Burnaford et al., 2007).

1950's to 2011

Following a brief post war funding increase in the early 1950's, the arts were again placed in jeopardy, following the launching of the Soviet satellite Sputnik 1, as the government perceived an education crisis. The resulting emphasis on mathematics and science that pervaded schools eroded funding and support for the arts in education. In an effort to maintain their foothold in the schools, arts supporters rallied together to organize efforts to position arts teaching and learning into public policy (Heilig et al., 2010).

Subsequently, in the 1960's, the U.S. Department of Education began to support research and curriculum projects in the visual and performing arts. These studies resulted in the birth of the National Endowment for the Arts (NEA). This new federal agency began to generate public funding and support for arts education that contributed to an increased interest in arts integration (Burnaford et al., 2007).

Economic downturn of the 1970's and the release of *A Nation at Risk* (1983) once again placed the arts subjects in jeopardy (Heilig et al., 2010) as schools focused attention and resources back to the basics of education; reading, writing, and mathematics. As a result, the NEA shifted its focus to supporting school and community arts partnerships. These partnerships became common within schools particularly in

urban areas and contributed to opening discussion about arts education between arts specialists and classroom teachers (Burnaford et al., 2007).

Simultaneously, a debate began regarding the appropriateness of arts integration practices. Proponents of arts education, concerned that the practice of arts integration in schools was undermining the legitimacy of the arts as subjects, argued that the arts warranted a place of their own in the curriculum (Whitesett & Franklin, 2011). While this debate between proponents of discipline based arts instruction and arts integration continues today, a growing body of knowledge suggests that a case for the arts promoting learning in arts disciplines or in other disciplines no longer needs to be made (Whitesett & Franklin, 2011). Studies suggest, rather, an interactive model in which learning in one discipline can enhance learning in another (Whitesett & Franklin, 2011).

Arts Integration and its Impact on Learning

Since the 1950's, amidst concerns that students in the United States were falling behind other nations academically and with subsequent pressures to raise academic standards, the arts have been slowly pushed to the margins of public education, viewed more as an affective enrichment rather than a foundational element of the curriculum (Oreck, 2004; Rabkin & Redmond, 2006). Advances in learning theory and a growing body of research, however, suggest that the arts play a critical role in increasing student academic achievement, cognitive capabilities, higher order thinking skills, and motivation for learning (Burnaford et al., 2001; Catterall et al., 1999; DeMoss & Morris, 2002; Fineberg, 1993; Grafton & Cross 2008; Rabkin & Redmond, 2006; Wandell et al., 2008).

In 1997, the results of a pivotal multi-year study were released that offered the first analysis of information of the National Educational Longitudinal Survey (NELS:88) on student participation in the arts (Catterall et al., 1999). This study found substantial and significant differences between students highly involved with the arts and students with little to no arts experiences in both high and low socio economic groups (Catterall, et al., 1999). This report, which paved the way for additional research, found that students highly involved in the arts showed overall academic gains over time, including gains in math and reading proficiency (Catterall, et al., 1999). Additional studies found that elementary age children experienced gains in reading, writing, reading comprehension and verbal expression following creative experiences in music and art (Catterall, 1998; Luftig, 1994).

Similarly, the 1999 Evaluation Summary that appeared in *Champions of Change* found that Chicago Arts Partners in Education (CAPE) schools showed growth along several different measures of student achievement (Catterall & Waldorf, 1999). When compared to other schools in Chicago serving comparable student populations, CAPE schools attained stronger test score increases over time on the city's standardized tests (Catterall & Waldorf, 1999).

A more recent study by the College Board (2007) suggested that students' scores on the SAT were positively correlated to the number of years they spent studying the arts. This study reported that students with four or more years of involvement in the arts scored ninety-eight points better on their SAT's than students who took a half a year or less (College Board, 2007).

Other studies have indicated that arts learning improves children's cognitive capacities (DeMoss & Morris, 2002; Grafton & Cross, 2008; Wandell et al., 2008). Grafton and Cross (2008) found that training in acting appeared to lead to memory improvement through the learning of general skills for manipulating semantic information. A study by Wandell et al. (2008) investigated how arts education affected behavior development and the reading skills of seven to twelve year olds. Their findings indicated that phonological awareness, one of the central predictors of early literacy, was correlated with both music training and the development of a specific brain pathway (Wandell et al., 2008).

Arts integration, a teaching practice that creates connections between one or more of the arts disciplines and other academic subject areas, has also been shown to enhance learning. An evaluation of the *Arts First* Windward Research project in Oahu, Hawaii found that *Arts First* project schools outperformed students in control schools both on state tests and in attitudes towards school (Smith et al., 2010). Whitesett and Franklin (2011) found that teachers' use of arts integrated strategies produced an increase in student knowledge, understanding, and appreciation of both the arts and non-arts discipline.

Burton et al. (2010) found that the use of arts strategies increased students' use of higher order processing skills in terms of their ability to think critically, analyze their own learning, problem solve, and synthesize new information. Similarly, Fineberg (1993) found that students participating in arts learning acquired skills in analysis, synthesis, and judgment.

In addition to enhancing student achievement and learning, arts integration has been shown to increase student motivation and excitement about learning (Eisner, 2002; Fineberg, 1993). A study by DeMoss and Morris (2002) investigated whether students' experiences with arts integrated learning would vary from non-arts integrated learning. Their research showed that when engaging in arts integrated learning experiences, students were more independently motivated and invested in the learning, more willing to take on challenging tasks, and more inspired to continue their inquiries beyond the assignment requirements (DeMoss & Morris, 2002).

One of the most intriguing aspects of the research is that arts integrated instruction has been reported to be an effective instructional strategy for diverse student populations (Catterall, et al., 1999; Eisner, 2002; Mason et al., 2004, Rabkin & Redmond, 2004). One example of this is a study by Mason et al., (2004) which examined the impact of arts integrated instructional strategies on students with disabilities. Their findings indicated that arts strategies assisted disabled students in demonstrating their knowledge of academics and helped them gain access to learning.

In summary, a significant amount of research connects the arts and arts integrated instruction to positive impacts on student cognitive development, learning, motivation, higher order thought processing, and overall academic achievement (Burnaford et al., 2001; Burton et al., 2010; Catterall et al., 1999; DeMoss & Morris, 2002; Eisner, 2002; Fineberg, 1993; Grafton & Cross 2008; Rabkin & Redmond, 2006; Wandell et al. 2008). This growing body of knowledge supports the idea that the arts are not merely subjects for affective enjoyment but are uniquely suited to engage students in deeper and more

thoughtful inquires. Arts instruction, when tied to learning standards, can become a powerful tool for teaching and learning (Burnaford et al., 2001).

Arts Integration and Theories of Practice

Teaching subject matter as separate disciplines is the prevailing practice in public schools. Typically, subjects are divided into distinct periods throughout the day and taught in isolation as segregated “silos of knowledge” (National Central Regional Educational Laboratory, n.d.). This practice, commonly referred to as the traditional curriculum design, has a long history at the university level and was adopted for use in the United States in the 1890’s at the elementary, middle and high school levels in an effort to standardize the curriculum (Beane, 1999; Pinar, 2004).

Supporters of the traditional curriculum design argue that studying subjects as separate entities allows for greater depth of understanding of content. Unfortunately, this design is also heavily standards based with a strong emphasis on testing. Critics of the traditional curriculum design contend that this method produces fragmented knowledge that finds little use in real world practice other than in the raising of standardized test scores (Pinar, 2004). The National Middle School Association and the Carnegie Council on Adolescent Development support moving away from a separate subject approach of instruction (Beane, 1999). In addition, the traditional curriculum design is not supported by curriculum theory that purports helping students make meaning of curriculum across school subjects and academic disciplines (Pinar, 2004).

An alternative to the traditional curriculum design is curriculum integration. This curricular approach has cycled through educational history in various forms since

the late 1800's (Association of Supervision and Curriculum Development [ASCD], 2002) but is now receiving renewed attention from educators due to advances in knowledge about learning and in attempts to better prepare students for the 21st century workforce. The term *integration* is defined as a combination of aspects or parts that work well together or a combining of thought processes or functions that are normally separate (Encarta, 2010). In terms of curriculum organization, *integration* is a combining of two or more disciplines, but in terms of educational practice, curriculum integration can take on many forms.

Arts integration is generally thought of as a teaching approach that builds a set of relationships between the elements and concepts of music, dance, visual or theater arts and other academic disciplines (Deasy, 2003). Although a review of the literature reveals that researchers have struggled to come to consensus on a common definition or theory of practice for arts integration (Parsons, 2004; Whitesett & Franklin, 2011), a key component of this approach is the goal of acquiring in-depth knowledge in both the arts and non-arts disciplines (Garrett, 2010; Whitesett & Franklin, 2011). Whitesett and Franklin define arts integration as “an approach to teaching and learning that connects elements and concepts of arts disciplines to those of other academic subjects, with a goal of increasing knowledge, understanding, and appreciation of both academics and the arts” (p. 3). Connections between disciplines can come in the form of common concepts, organizing principles, or large overarching ideas or themes (Burnaford, et al, 2001; Whitesett & Franklin, 2011).

There are numerous approaches to implementing an arts integrated curriculum. Three of the most commonly used approaches are interdisciplinary, multidisciplinary, and transdisciplinary. Interdisciplinary approaches to arts integration combine two or more subjects around a process such as research or a concept such as measurement or patterns (Whitesett & Franklin, 2011). Connections are made with content through the teaching of the skill that cuts across disciplines. Performance based assessments are still easy to integrate in this method which makes it the most widely implemented approach (ASCD, 2002).

The multidisciplinary or multi-subject approach is a slightly more complex integration model. It does not synthesize the knowledge and methods from various disciplines but presents the subjects generally as non-interactive parallels organized around a central theme or topic (Yang, 2009). In this way, the subjects typically retain their separate identities and separate time slots within the school day (Beane, 1999). Teachers who emphasize a multidisciplinary approach keep the content of each subject intact, but they unite disciplines by organizing the curriculum around central themes or concepts (Whitesett & Franklin, 2011). The multi-disciplinary approach, while creating connections around central themes, can still result in fragmented knowledge and minimal connections across disciplines.

The most complex of the integration approaches is transdisciplinary (ASCD, 2002). This curriculum design organizes the curriculum around problems or issues without considering subject lines. The curriculum is real world centered and driven by student need (ASCD, 2002). Planning for this arts integrated model begins with a

central theme or issue and subject matter is taught in relation to the problem. Students experience subject matter on a project to project basis rather than a subject to subject basis as in the multidisciplinary model. Thus, project based or inquiry based learning are the most typical organizational structures for this approach. Transdisciplinary curriculum helps students to connect new learning to prior understandings and life experiences, the process of which is strongly supported by learning theory. Educational theorist John Dewey (1938) emphasized that study of any subject must begin within the scope of ordinary life experience. By beginning with life experience, students construct new knowledge as they respond to the educational environment. Subject disciplines can then be synthesized to create new conceptual understandings.

An added benefit of the transdisciplinary approach is that it not only offers an interdisciplinary perspective but also better prepares students for multifaceted professions through its focus on real world issues and problem based learning. The workplace rarely presents itself in separate packages, as students would encounter in a traditional curriculum, but rather in complex blended problems (Brooks, Fox, Okagbue-Reaves, & Lukomski, 2009). This prompts employers to seek out problem solvers who can think critically and deal with ill structured complex issues (ASCD, 2002). Using the transdisciplinary curriculum approach, students are able to develop skills that cut through and across disciplines.

While this literature review has attempted to delineate some characteristics of the various arts integration models, there is still much disagreement in the literature that complicates the implementation of this curriculum approach. The common thread to all

the approaches is an attempt to provide students with more meaningful learning experiences (Matheson & Freeman, 1997). Thus, the integrated curriculum approach, regardless of methods or terms, is not just an attempt to combine two or more subject disciplines but to do so in ways that relate to real world experiences (Matheson & Freeman, 1997) in an effort to enhance learning and better prepare students for work in the 21st century.

Facilitating Arts Integration at the Elementary Level

For the arts to be included as a meaningful part of instruction, regardless of the instructional approach, they must be integrated meaningfully and purposefully (Burnaford, et al., 2001). The arts should naturally connect with the non-arts content in a way that appreciates and aligns to each subject area. In addition, students must be given time to work through a project and move back and forth between different subjects areas and media (Burnaford, et al., 2001). This type of teaching and learning requires intentional and sometimes complicated planning that may involve multiple parties (Burnaford et al., 2001; McDonald, 2010).

A method that could allow for easier facilitation of arts integration is flexible scheduling. Flexible scheduling eliminates a rigid daily schedule and allows teachers to plan lengths of instructional time that suit the learning activity (McGregor, 2006). By using flexible scheduling, students can focus on and complete an arts project without being interrupted by subject specific periods of the day. This allows the flow of learning to be continuous and coherent (Burnaford, et al., 2001).

While arts integration models can and have been successfully implemented at the secondary level (Burnaford, et al., 2001; Deasy, 2002; McDonald, 2010), the elementary school may more easily accommodate this type of teaching and learning. In the elementary, students spend much of their day with a generalist teacher who is responsible for designing and delivering instruction in all curricular areas (McCoubrey, 2000). For this reason, the elementary teacher is not constrained by the rigid bell schedules that are typical at the secondary level and instead can allocate time as appropriate to the learning activity.

Research suggests that all four arts disciplines can be meaningfully integrated into the foundational content areas in the elementary classroom (Albright, 2012; Deasy, 2002; Dupont, 1992; Hanson, 2002; Rose, 1999). A study by Rose (1999) found that 1st grade students significantly improved their basic reading skills in comparison to a control group through the integration of dance by allowing students to represent letters with their bodies. Similarly, Dupont (1992) found the use of creative drama improved the reading comprehension skills of fifth grade remedial readers. Another study by Hanson (2002) involved the use of visual art with fourth grade students to enhance learning in mathematics and science. Findings indicated that student knowledge of the concepts in visual art, science and mathematics increased substantially. By integrating music into third and fifth grade math curriculum, students' achievement scores were significantly increased in comparison to a control group (Albright, 2012).

Since the elementary teacher is responsible for instruction in the foundational subjects of mathematics, science, reading, and social studies, they would naturally have

a wider choice of entry points and applications for arts integrated lessons. Lessons that combine multiple subject areas could be combined within the course of the day without impact to other teachers or school schedules as might occur at the secondary level.

While a growing body of research supports the use of arts integration at both the secondary and elementary levels (Albright, 2012; Burton et al., 2010; Burnaford, et al., 2001; Deasy, 2002; Dupont, 1992; Hanson, 2002; McDonald, 2010; Rose, 1999; Whitesett & Franklin, 2011), the elementary generalist teacher possesses a unique environment in which to integrate multiple subjects within the school day without need for time constraining collaboration with teachers from other disciplines or the time constraints of subject specific bell schedules.

The Elementary Generalist and Arts Integration

In response to the research on the arts and its impact on learning, interest for including quality arts programs in the curriculum surfaced at the national level. In 1994, both national and state standards for the arts were developed and, in 2001, the *No Child Left Behind Act* (2002) included the arts as a core academic subject. Finally, in 2003, Texas Senate Bill 815 (SB815) was signed into law. SB 815 mandated that Texas school districts provide instruction in all of the required curriculum, including both foundational and enrichment subject areas. This law required that the Fine Arts essential knowledge and skills, as outlined by the Texas Education Agency, be taught in all public schools. It did not require the Fine Arts be taught by certified specialists that meant, in many schools, the burden for teaching the arts fell on the elementary generalist teacher (Burnaford, et al., 2001; McCoubrey, 2000; Oreck, 2004). Unfortunately, most teachers

under pressure to meet state accountability standards do not have time during the day to include the arts and are equally unprepared to teach it (Oreck, 2004). If the arts are to be included as part of the curriculum in the elementary classroom, teaching them in an integrated format that respects the available instructional time is the only viable option. In addition, teachers must be provided the knowledge and skills to implement quality arts instruction (Oreck, 2004).

In his study, *The Artistic and Professional Development of Teachers: A Study of Teacher's Attitudes Toward and Use of the Arts in Teaching*, Oreck (2004) examined elementary teachers' attitudes regarding arts based instruction and the frequency with which they used arts strategies in the classroom. His study included teachers over six states who were participating in arts-based professional development programs. Oreck (2004) found that while teachers strongly believed in the importance of the arts in the curriculum, they rarely used arts strategies in their teaching. Some of the reasons reported were the lack of time, space, and materials, and the pressure to cover the required curriculum. The greatest reported factor, however, was the teacher's self-efficacy relating to creativity and artistry (Oreck, 2004). Self-efficacy refers to a teacher's belief in their ability to be successful with a task (Bandura, 1977). According to the study, teachers did not have confidence in their ability to teach the arts. Oreck's findings support the idea that professional development could positively affect teachers' use of arts integrated strategies (Oreck, 2004).

Teacher Self-Efficacy

Bandura (1986) defines self-efficacy as “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performance” (p. 391). This differs from a person’s self-concept. Like self-efficacy, self-concept is influenced by attitudes, habits, and beliefs, but self-concept refers to the sum of how persons view themselves physically, psychologically and socially (Evans, 2008). Self-efficacy, on the other hand, refers to a person’s confidence in their competence to perform a specific task (Nakamura, 2000 as cited in Evans, 2008). Self-efficacy is developed and affected by a person’s experiences, both positive and negative (Bandura, Adams, & Beyer, 1977).

Teacher self-efficacy refers to a teacher’s belief in their ability to be successful with a task (Bandura, 1977). Teacher self-efficacy also has been defined as a teacher’s belief in their ability to affect the academic performance of students including those that are difficult or unmotivated (Garrett, 2010). A review of the literature reveals that a teacher’s degree of self-efficacy affects their level of persistence (Bandura et al., 1977; Garrett, 2010), enthusiasm (Guskey, 1984), and ability to adapt to change (Guskey, 1988).

Beliefs of self-efficacy can be affected through four main types of information;

- performance accomplishments;
- vicarious experiences;
- verbal persuasion; and,
- emotional arousal (Bandura et al., 1977).

Performance accomplishments are the degree to which the individual experiences success or failure performing a task. This is the most important source of efficacy information and is dependent upon a number of factors including “the difficulty of the task, the amount of effort expended, the number of ... supports, and the pattern and rate of successes” (Bandura et al., 1977, p. 126).

Vicarious experiences are the expectations derived from watching others experience success or cope with the difficulties of tasks. Seeing others being successful with a task can produce the belief that persistence might generate success (Bandura et al., 1977). This is a less effective method for developing efficacy than personal performance accomplishment.

Verbal persuasion is affecting a person’s efficacy by convincing them through suggestion that they can be successful. Like vicarious experiences, this is a much weaker method for affecting efficacy. Those who have experienced persistent failure with a task will easily put aside suggestions of successful mastery (Bandura et al., 1977).

Finally, emotional arousal affects an individual’s efficacy when they are experiencing anxiety and stress. People are more likely to perceive themselves as ineffective when they are tense or threatened. Diminishing emotional arousal can positively affect self-efficacy.

Improving Teacher Self-Efficacy for Arts Integration

Most teachers are unprepared to teach using arts approaches (Garvis & Pendergast, 2010; Russell & Zembylas, 2007). Powell (2001) suggested this is due to teachers’ limited arts background, knowledge, or experience. If teachers are to

successfully use arts approaches they must possess the confidence and skills necessary to teach them (Loucks-Horsley et al., 2003). Oreck (2004) suggests that teachers' lack of self-efficacy for teaching the arts is the single greatest barrier to classroom implementation. His study revealed that teachers' most often explained their low level of confidence with arts on a lack of specific training or prior arts instruction. The majority of study participants reported having had one year or less of arts instruction in their lifetime.

Bandura (1977) suggests that self-efficacy is affected through four sources of information, performance accomplishment, vicarious experiences, verbal persuasion, and diminishing emotional arousal. While performance accomplishment is the most influential of the four, designing opportunities for a combination of these sources should have the greatest impact on developing teacher self-efficacy with arts integration practices. Oreck (2004) suggests that teachers need frequent attempts to experiment with artistic processes and methods. Since self-efficacy is affected by both positive and negative experiences, it is critical that these attempts be designed with a level of difficulty that allows teachers the opportunity for success.

In addition, elementary teachers' self-efficacy with arts strategies should be positively impacted through opportunities to observe colleagues engaging in arts integrated lessons. Bandura (1977) suggests that seeing others coping with the challenges of a task allows the observers to envision themselves being successful. This should also aid in diminishing the stress of engaging with the process on their own.

Lastly, supervisor or administrative support is a critical component for affecting change in teacher practice. Educational leaders must understand how teachers feel as they change their practices, what resources they will need, and when they will need them (Loucks-Horsley et al., 2003). Teachers experimenting with creative teaching methods, such as arts integration, need to perceive that administrators support these practices in order to develop a strong sense of efficacy.

Through a combination of frequent and successful attempts with artistic processes or methods (Oreck, 2004); opportunities to observe colleagues engaging in successful arts integrated lessons; and verbal support from their supervisors for using the strategies (Bandera, 1977), teachers' self-efficacy with arts integrated strategies should be positively impacted.

Professional Development and Changes in Teacher Practice

Teacher professional development is considered to be the single greatest factor for influencing student achievement (Guskey, 2002). Professional development occurs in a variety of formats and covers an endless range of topics, yet the goal of each is to affect student learning. Guskey (2002) states that "professional development programs are systemic efforts to bring about change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students" (p. 381). Yet, despite the fact that school districts spend enormous amounts of money on professional development, these programs have yielded little to no positive gains in student learning (Diaz-Maggioli, 2004). Professional development programs have failed to produce change in teacher practice for a number of reasons, however, studies suggest, the

majority of programs are ineffective because they fail to consider teacher motivations for engaging in professional learning, the process of teacher change (Guskey, 2002), or the method in which learning occurs (Loucks-Horseley et al., 2003).

While professional development is required, most teachers engage in professional development because they want to become better teachers. Huberman (1995) states that most teachers view professional development as a pathway to improve their teaching competency and derive professional satisfaction. Teachers hope to learn specific and practical ideas that directly connect to their classroom and improve the academic achievement of their students (Guskey, 2002). Teachers are attracted most to professional development because they believe it will increase their teaching knowledge and their effectiveness. Programs that fail to address these desires are likely to be perceived as a waste of time.

Another reason professional development programs may be ineffective is that they fail to consider the process by which teachers experience change. Early professional development models were based on the idea that professional development activities should first focus on changing teachers' beliefs and perceptions (Guskey, 2002). These programs involved teachers in planning sessions and included training aligned to surveys and needs assessments that determined the type of learning teachers required. While the inclusion of teacher input is important, these programs rarely resulted in systemic change (Guskey, 2002; Loucks-Horseley et al., 2003)

An alternative model suggests that changes in teacher's attitudes and beliefs occur only after the teacher sees evidence that the change resulted in improvement in

student learning (Guskey, 2002; Loucks-Horseley et al, 2003). A study by Crandell (1983) that attempted to implement innovative practices in 146 school districts revealed that teachers only became committed to the new practices after they had used them successfully in the classroom. This model implies that change in teacher practice is the result, rather than a cause, of change in student achievement (Guskey, 2002). It then follows that if teachers do not see a positive change in student learning, the change in practice will not occur.

Guskey's (2002) model has interesting applications for professional development. When attempting new strategies, teachers incur considerable risk that students could be negatively affected (Guskey, 2002). Since student gains might not be immediately apparent as teachers struggle with the model, it is likely teachers would be inclined to fall back on more familiar and comfortable practices. Educational leaders must continue to provide ongoing support and pressure teachers to persist through the fears and challenges required to master the new skill, if change in teacher practice is to occur (Guskey, 2002).

Meeting the needs of diverse groups of students requires new and innovative methods of teaching. Research suggests, however, that the more a model of teaching varies from the customary teaching style, the more uncomfortable teachers will be using it (Joyce et al., 2009). Professional development designs should consider that learning is a change process that requires time for the learner to add, modify, refine, and restructure prior understandings (Loucks-Horseley et al., 2003). Opportunities to challenge existing ideas, reflect on learning, and connect with other learners are integral to this process.

Teachers must practice with the model, identify areas where they are having difficulty and receive additional support in their areas of need (Joyce et al., 2009).

Loucks-Horseley et al. (2003) argue, further, that professional development designs often are not reflective of the research on how people learn. Key components of learning theory include that new knowledge is constructed based on prior learning and that the construction of new knowledge is a change process that occurs through diverse learning experiences (Bransford et al., 1999). Professional development designs should consider the vast array of knowledge that in-service teachers already possess and attempt to make direct connections to this knowledge. This could be accomplished by situating the learning into familiar contexts so teachers can link new ideas to what they already know (Loucks-Horseley et al., 2003).

Job–Embedded Professional Development

In a meta-analysis on the characteristics of effective professional development, Rasmussen (2008) presented a synthesis of studies published between 2000 and 2008. He identified five key characteristics evident in the literature from this period. They included 1) a focus on content or pedagogical knowledge; 2) a connection to the classroom; 3) active participation; 4) providing opportunities for collaboration within the same school or grade level; and 5) an extended duration.

One model of professional development that contains each of these five characteristics is job-embedded professional development (JEPD). The JEPD model can be defined as teacher learning that is grounded in teaching practice and designed to enhance teachers' content specific instructional practice (Croft et al., 2010). In this

model, teachers with similar interests or concerns, such as the same grade level or subject area, work together in a model of continuous improvement to find solutions for real classroom or school based problems. Another characteristic of the model is that most of the teacher learning occurs within the confines of the school day (Crofft et al., 2010). Designs for JEPD include mentoring, coaching, lesson study, action research, peer observation, examining student work, professional learning communities and study groups (Crofft et al., 2010).

A review of the literature suggests that the JEPD model is correlated with teacher change; student achievement (Vassallo, 2007) and teacher satisfaction (Marsden, 2007). A study by Vassallo (2007) which examined the impact of the job-embedded professional development model on reading achievement, the use of instructional strategies, and school culture, found that the model significantly impacted all three areas. Changes in students' achievement scores on state tests were significant, teachers appeared to be consistently using the strategies, and a collaborative culture was developed at the campus through the use of the model (Vassallo, 2007).

In addition to impacting teacher change and student achievement, teacher perceptions of JEPD have been shown to be positive. A study by Marsden (2007) revealed that while teachers applied their learning in the classroom with varying degrees of success, participants felt the JEPD model was more effective for their daily practice. A similar study by Frehner (2008) found that a job-embedded professional development program with middle school teachers had a positive impact on classroom values.

Online Professional Development

Design elements of online professional development. Online or web based professional development (OPD) is a format for teacher learning that is typically less expensive than traditional face-to-face training and offers the benefit of a wider range of learning opportunities than what is locally available (Dede et al., 2004). This type of professional learning can be offered in either synchronous or asynchronous formats depending on the nature of the learning and the desires of the instructor and participants. Synchronous learning requires all participants to meet at specific times and engage in the learning together with the presenter or trainer. Asynchronous learning allows participants to engage with the material individually when and where it is convenient and needed (Dede et al, 2009; Yang & Liu, 2004). This may allow teachers the real, just-in-time support currently lacking from more traditional professional development formats.

While there is ample research on the standards for the design of online curriculum (Ertmer & Abdelfattach, 2007; Johnson & Aragon, 2003; Mollar, Wellesley, & Huett, 2008; Roschelle, Pea, Hoadley, Gordin, & Means, 2000), Johnson and Aragon (2003) suggest that the most powerful online learning environments use a blend of behavioral, cognitive, and social learning theories and

- incorporate positive reinforcement and repetition;
- address multiple senses;
- limit the amount of information presented;
- connect to prior knowledge; and,

- encourage group interaction, peer assessment and personal feedback.

These characteristics correlate strongly to the body of knowledge on learning theory (Bransford et al., 1999).

Ertmer and Abdelfattach (2007) found that effective online learning environments employ a variety of teaching strategies and include video, animation, concept mapping, case studies and quizzes. Further, cognitive research suggests that adults learn best when content is organized into meaningful chunks and they can engage with hands on, motivating activities with real life connections (Johnson & Aragon, 2003)

The research of the Center for Online Professional Education (COPE) at Education Development Center, Inc. (Treacy, Kleiman, & Peterson, 2002) suggests that successful OPD programs reflect the following elements:

- based on an identified district professional development need,
- integrated with face to face professional development,
- participants have the support of rich online learning experiences, and
- participants have readily available and reliable access to technology and support.

Effects of online professional development. Despite the popularity and growth of this learning platform, however, an ongoing debate exists regarding the appropriateness of its use in various contexts. Several reviews of the literature have found no significant difference between face-to-face and online education (Russell, 2001) however, many of the studies cited have been criticized for including only anecdotal evidence (Dede et al., 2009; Solimeno et al., 2008). Barbera (2004) states that online platforms have yet to reach the standards of high quality education and few

studies cite evidence of online platforms producing deep conceptual learning or changes in teacher practice (Dede et al., 2009). Further, some people prefer face-to-face rather than online learning citing reasons such as feelings of isolation, lack of technological skills, and lack of independent learning skills (Newton, 2003).

While there are a number of studies in the literature that examine the effect of online learning with students, there are very few studies which examine the effectiveness of online platforms for professional development. One study by Lebec and Luft (2007) conducted a mixed methods study to examine the effectiveness of an online professional development program for science teachers. The instructional focus of the program was to prepare participants for a qualifying science exam. The study findings indicated that although participants gained in basic knowledge such as concepts, ideas, and terms, there was less evidence of deeper conceptual understanding (Lebec & Luft, 2007). This discrepancy was made evident by the comparison of quantitative and qualitative data.

Another study by Rasmussin (2008) examined the effectiveness of an online professional development model for elementary teachers in agricultural literacy by evaluating the teachers continued use of the strategies. This program provided teachers with specific teaching strategies and lesson plans that could be immediately implemented in the classroom. Rasmussin's (2008) findings indicated the program had been successful based on teachers' self-reported use of the materials three years later.

A large body of knowledge exists on the various aspects of teacher professional development. This review of the literature highlighted research on professional development and teacher change, the job-embedded professional development model,

and the online professional development model. While some research was found on the use on online professional development with elementary teachers, no examples of research were found that specifically addressed the efficacy of online learning with the arts. The researcher will attempt to synthesize the research presented in this literature review to inform the design of online instructional modules for teacher professional development as part of a job-embedded professional development.

Background of PISD

The PISD is located on the southern most tip of Texas in an area called the Rio Grande Valley. The school district consists of 20 elementary schools, seven middle schools, three traditional and two alternative high schools. The PISD serves approximately 25,000 students from Pre Kindergarten (PK) through the 12th grade and is 93% Hispanic, 65% economically disadvantaged and 27% Limited English Proficient. Elementary schools serve children in grades PK through five.

Teachers in the PISD are 77% Hispanic, 21% White, and 2% from other nationalities. The large majority are females at 74%. Seventy-eight percent of teachers hold a bachelors degree and 21% hold a master's degree or higher. The majority of teachers have more than 11 years of teaching experience, at 52%, while 21% have less than five years of experience.

In compliance with Section 1119 of NCLB (2002), the PISD employs highly qualified content area teachers at all grade levels. A highly qualified teacher must have a college degree, be certified in Texas to teach their assigned grade level, and demonstrate competency in the academic subject area. At the elementary level in PISD,

classroom teachers are responsible for teaching all four foundational subjects, as well as visual arts and theater arts. Classroom elementary teachers typically maintain an Early Childhood (EC)-4 Generalist, 4-8 Generalist, or EC – 6 Generalist certification, depending on their assigned grade level.

The PISD is a strong supporter of arts education, employing certified and degreed professionals in music in grades Kindergarten through 12th grade and in all arts disciplines in grades six through 12. All middle schools and traditional high schools maintain comprehensive and competitive arts programs in visual arts, theater arts, choral music, orchestra, and band with additional programs available at the high school level including dance, mariachi, jazz band, and show choir. According to the PISD Fine Arts census report (Herrera, 2011), more than 10,000 students, roughly 83%, participated in fine arts programs in grades six through 12 during the 2011-2012 school year.

In 2008, the PISD received a Federal Arts in Education grant that allocated approximately \$1,000,000 over four years for teacher professional development in arts integration. Elementary principals were given a choice to participate in the grant program. All but one elementary school chose to participate. Over the last four years, approximately 140 professionals in PISD have participated in various arts integration workshops, with some completing more than 150 hours of training. Participants also received an abundance of student arts supplies and materials to facilitate classroom instruction.

International Baccalaureate Accreditation and Transdisciplinary Units of Inquiry

The International Baccalaureate (IB), a globally recognized diploma program, was founded in Geneva, Switzerland in 1968 for internationally mobile students. Since 1994, the IB has expanded to include the Middle Years and Primary Years Programs (PYP) and now serves students ages three to nineteen (International Baccalaureate Organization, 2012). The PISD instituted the IB diploma program in 2001 for students in grades 11 and 12. Students who graduate with the IB diploma are assured at least 24 credit hours at all state universities in Texas. The PISD instituted the Middle Years Program (MYP) for grades six through ten and the Primary Years (PYP) program for students in elementary school in 2007. In addition, the PISD recently became an IB District. As an IB District, all 20 elementary schools and seven middle schools will receive individual accreditation as IB World Schools by the year 2014. Currently, all elementaries are in various stages of the IB Primary Years Program (PYP) accreditation process.

The PYP is an all-school inclusive curriculum model that promotes inquiry-based instruction arranged within six transdisciplinary themes: who we are; where we are in time and place; how we express ourselves; how the world works; how we organize ourselves; and sharing the planet (International Baccalaureate Organization, 2012). The PYP curriculum framework requires that students use the subject areas of language, social studies, mathematics, science, the arts, and personal, social, and physical education to explore these six transdisciplinary themes through integrated units of inquiry. To receive accreditation, teachers must show evidence that they have developed

and implemented a minimum of four units of inquiry each school year. These units must incorporate elements of all six-subject areas including the arts and arts integrated activities or assessments.

CHAPTER III

METHODOLOGY

Many studies on arts integration have addressed student learning outcomes (Burnaford et al., 2001; Burton et al., 2010; Catterall, 1998; Catterall et al., 1999; DeMoss & Morris, 2002; Eisner, 2002; Fineberg, 1993; Grafton and Cross 2008; Luftig, 1994; Rabkin & Redmond, 2006; Smith et al., 2010; Wandell et al., 2008), but few have examined models of teacher professional development in arts integration (Burnaford et al., 2001; Garret, 2010; Oreck, 2004). In addition, the researcher found no examples of studies that examined online models of professional development in arts integration.

Further, a review of the literature indicated that evidence supporting the effectiveness of online teacher professional development models was largely anecdotal (Barbera, 2004; Dede et al., 2009; Solimeno et al., 2008) and based on self-reported surveys or objective examinations (Lebec & Luft, 2007; Russell, 2001). Very few studies attempted to assess teachers' conceptual learning through both quantitative and qualitative data (Windschitl, 1998).

Research Questions

The central question, “how does an online job-embedded professional development program affect elementary teachers’ beliefs about and use of arts integrated approaches to learning,” guided this study. Additional study questions included:

1. What attitudes and beliefs related to the use of arts approaches in teaching can be identified and interpreted from teachers' responses on the Teaching With the Arts Survey (TWAS) (Oreck, 2004)?
2. What is the effect on teacher self-efficacy for teaching the arts after engaging in an online professional development program?
3. How are teachers' knowledge and understanding of arts integration practices affected by using an online program?

Methodology

The researcher approached this mixed methods study from a pragmatic worldview. Pragmatism has been called the “third methodological movement” (Tashakkori & Teddlie, 2003) in which reasoning moves between subjectivity and objectivity and induction and deduction (Evans, Coon, & Ume, 2011). Through a pragmatic view, the researcher could focus on the research problem and employ both quantitative and qualitative data to meet the needs and purpose of the research (Creswell, 2007). Pragmatism was formally linked to mixed methods approaches because it allows the use of both quantitative and qualitative methods in a single study, it abandons the use of concepts such as *truth* and *reality*, and the research question is considered to be more important than the method or underlying philosophy (Tashakkori & Teddlie, 2003).

An advantage of the mixed methods approach is that it can be used to address complex research problems (Creswell, Plano Clark, Gutmann, & Hanson, 2003), such as those in this study, that require both quantitative and qualitative sources. Mixed methods studies are appropriate when the use of only one method provides an

incomplete answer to the research problem (Creswell & Plano Clark, 2011) or when the researcher seeks a broader understanding of the research problem than a single method can provide (Creswell, 2007). Creswell and Plano Clark (2011) state that mixed methods are warranted “when one data source is insufficient, results need to be explained, or a second method is needed to enhance a primary method.” Mixed methods studies are defined as “involving the collection ... of both quantitative and/or qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research (Creswell, 2003, p. 212).

Setting

The PISD, located in the Rio Grande Valley area of Texas, serves approximately 25,000 students Kindergarten through 12th grade. The student population is 93% Hispanic, 65% economically disadvantaged and 27% Limited English Proficient. A total of 20 elementary schools serve children in grades PK through five. At the elementary level, content specialists in the arts are maintained only in music. As a result, general classroom teachers are responsible for teaching English Language Arts, Science, Social Studies, Mathematics, Visual Art, and Theater Arts.

In 2008, in an effort to assist elementary teachers with the visual and theater arts content, the PISD began an intensive professional development program in arts integration strategies. The program, funded by a four year federal Arts in Education grant, was optional for campus principals. All but one of the 20 elementary schools, Public Elementary School #10, chose to participate.

Public Elementary School #10, serves approximately 850 students PK through 5th grade. The student population is 95% Hispanic and 98% economically disadvantaged. The campus employs 42 teachers of whom 36, or 85.7%, are Hispanic and 6, or 14.3%, are non-Hispanic White. Approximately 82% of the teachers are female with an average of 10.6 years of experience.

PISD has committed to district wide IB program implementation which involves the sequential training and accreditation of all elementary campuses within four cohort groups. Upon completion of the accreditation process, it is the district's goal that all 20 elementary campuses will be accredited as IB Primary Years Program (PYP) World schools. Public Elementary School #10 is in the last cohort group, or cohort four. As a cohort four school, the campus will apply for candidacy in April of 2013 and begin PYP training in May. The training will continue through the summer of 2013 and include the construction of unit planners that will integrate foundational and enrichment subjects through the exploration of the six transdisciplinary themes. The transdisciplinary themes consist of:

- who we are,
- where we are in time and place,
- how we express ourselves,
- how the world works,
- how we organize ourselves, and
- sharing the planet (International Baccalaureate Organization, 2012).

Unit planners will guide classroom instruction during the school year 2013-2014 with the authorization visit occurring in 2014-2015. Prior to the authorization visit, the campus must have developed, taught, and reflected on six units of inquiry. Adherence to the transdisciplinary philosophy of inquiry will determine whether the campus receives accreditation as an IB World School, so the strength of the unit planners is a critical factor.

Public Elementary School #10 was chosen for the study because of the following characteristics:

- Since teachers were not part of the Art in Education professional development program, their opinions about arts learning or the use of arts strategies are less likely to have been influenced by previous training. In addition, increases in their use of the strategies are more likely to be attributed to the online professional development (PD) program.
- The campus administration is supportive of creative instructional strategies that address diverse learning needs.
- Public Elementary School # 10's position in the IB accreditation process makes the campus uniquely suited to begin training in arts integration strategies. IB training is extensive and time consuming. Teachers will not begin IB training until the spring of 2013; however, all campus teachers and administrators are aware of the transdisciplinary components of the PYP philosophy and are receptive and anxious to begin experimenting with strategies that will help them be more prepared for implementation

of the IB framework. Training in arts integrated instructional strategies will make teachers better prepared to begin IB unit planner development.

Participants

All 35 teachers of grades Kindergarten through fifth grade employed at Public Elementary School #10 were invited to participate in the study. Following IRB approval, the researcher presented a power point presentation and a program brochure to the potential participants that stated the purpose of the study, participant's rights, a description of the data that would be collected, measures that would be taken to protect participant confidentiality, the online professional development program, and other pertinent information. Additionally, the researcher displayed the art supplies that would be distributed to participants. Due to the need for supplies to carry out the instructional content, participation in the online program was limited to a maximum of ten participants.

Teachers were invited to participate in two ways; by agreeing to fill out a survey to assess their use of and attitudes regarding arts instruction only, or to participate in the full professional development program. Thirteen of the 35 teachers volunteered to participate. Six teachers volunteered to complete the survey only (SO) (N=6). Initially, nine teachers volunteered to participate in the full professional development program. Prior to the beginning of the online program, however, two teachers reluctantly withdrew due to unrelated issues. Seven teachers completed the professional development program (PD) (N=7). A more detailed description of both the survey only and the PD participants is provided in Chapter IV.

Online Professional Development Program

All teachers in PISD are allotted two non-instructional periods; one planning/conference period and one period to be used for professional development. During the period allotted for professional development, after school, or at home, participants could engage with the online course through Project Share (Texas Education Agency, 2012). Project Share is an online portal through which Texas teachers can collaborate and access digital content. This platform combines a suite of tools to build and disseminate professional development and to deliver online content (Texas Education Agency, 2011). All teachers in PISD are registered members of Project Share and are provided a user name and login information. The structure of the professional development program was asynchronous so participants could engage with the material when and where it was convenient and needed and were able to work at their own pace (Dede et al, 2009; Rasmussen, 2008; Yang & Liu, 2004).

Job-embedded professional development (JEPD) is underscored by the view that professional learning is social and situated in the context of the school and classroom (Crofft et al., 2010; Rasmussen, 2008). Throughout this program, participants were encouraged to actively engage with the course material during the school day and with the lesson material as a group to support social interaction and a collective experience. Participants who taught first grade had this opportunity during their grade level planning period and lunch. Their classrooms were also in the same hallway so they were able to frequently view art products displayed on the walls. Unfortunately, the two participants who taught grades three/four and grade five were alone in their areas and had separate

planning periods. As a result, they were unable to engage with other participants on a regular basis.

All participants, however, participated in three face-to-face interactions. The first was a meeting, held prior to week one of the online program, that provided a thorough introduction to the program and established a learning community and common purpose. The second interaction was a group interview, held in week four of the online program, which allowed participants to dialogue about the online program and instructional strategies while the researcher gathered data on their collective experiences. The final interaction was a meeting held in week ten of the online program to facilitate final data collection and provide closure for the participant group.

The online program was short and intense, occurring over the span of eight weeks. Teachers were engaged daily with arts content and facilitated a new arts integrated lesson with students on a weekly basis. Due to the short span of the program, only the arts disciplines of visual arts and drama were addressed.

When engaging in professional development, teachers hope to learn specific and practical ideas that directly connect to their classroom and improve the academic achievement of their students (Guskey, 2002). In this program, all of the learning modules were carefully designed to coincide and specifically align with each classroom teacher's grade level curriculum requirement provided through C-Scope. Because this sometimes facilitated the need for a different lesson for the various grade levels, ten modules were constructed and implemented.

Participants had access to lesson plans, arts resources, and professional development videos or presentations of no more than 30 minutes in length. Further, each lesson was designed to provide learning in both the arts and non-arts disciplines, a key component of effective arts integrated instruction (Garrett, 2010; Whitesett & Franklin, 2011). While there was some variety depending on content, most weekly modules included:

- new material on either a visual art or drama concept,
- a presentation and opportunity to experience an arts medium such as watercolor or pencil,
- a video or explanation of a classroom application of the arts strategy, and
- a structured lesson plan and assessment tool that teachers were expected to facilitate in their own classroom.

The following learning modules were included in the program:

1. Introduction to Arts Integration – Introduced the concept of arts integration and how it might be used in the classroom to enhance learning.
2. Math and Visual Art - Patterns and Sequencing – Used beading to assess student’s knowledge of pattern, sequence, and color theory.
3. Math and Drama - Time – Used drama based instruction (DBI) to enhance student understanding of reading analog and digital clocks.
4. Science and the Arts- Force, Motion, Art, and Drama – Combined science, art, and drama to explore the concept of force and motion based on the abstract works of Jackson Pollack.

5. Reading, Science and the Arts – Line, Color, and Sound – Explored the concept of sound, color, and line through the conceptualization of a story from the student’s textbook about making music.
6. Social Studies, Language and Visual Arts – Portraits and Poetry – Incorporated research on individuals that have shaped our community or country to create an original portrait and acrostic poem.
7. Social Studies, Language, and Visual Arts – Landscapes and Poetry – Combined visual art and poetry to explore the similarities and differences of various communities.
8. Reading comprehension – Language and Visual Arts – Developed reading comprehension skills through the creation of watercolor landscape paintings depicting scenes from the student’s reading.
9. Mathematics and Art – Still life drawing – Included the creation of a still life drawing to illustrate a mathematics number sentence.
10. Drama and Vocabulary Development – Utilized drama based strategies and games to develop student’s vocabulary.

After engaging with the art medium and facilitating instruction in their classroom, participants were asked to write a short reflection on the course discussion thread or forum provided through Project Share (Texas Education Agency, 2012). Through the forum, teachers could dialogue with each other and the researcher regarding the instructional strategies, their learning, and the online experience. In addition to the forum, the researcher supported the participants through email communication. Email

communications took place through PISD's Outlook email accounts. A screen shot of the course modules as they appeared on the Project Share site (Texas Education Agency, 2012) can be found in Appendix F.

Role of the Researcher

This study attempted to determine how an online arts integrated professional development program influenced teachers' use of arts integrated approaches to learning. A review of the literature produced no examples of online professional development in arts integration. In addition, if teachers were to implement their learning within the classroom, it was imperative that the professional development lessons be relevant and aligned to the teachers prescribed scope and sequence. In order to ensure alignment, the online professional development course was created by the researcher.

To create the program, the researcher met individually with PISD curriculum coordinators in Language Arts, Social Studies, Mathematics, and Science to explain the program and to elicit assistance with the creation of the course modules to ensure lesson integrity. Through these contacts, the researcher was able to obtain all district curriculum documents and resources for each foundational subject area.

Using the scope and sequence documents, the researcher carefully compared subject areas within each grade level to identify intersections of content and places where the arts could naturally support other subjects. Once these were identified, the researcher created the arts lesson plans and either constructed or collected the resources participants would need to facilitate the lessons with students. Resources included

videos to facilitate teacher learning, student handouts, art prints, art materials, and grading rubrics.

To create the visual art instructional videos, the researcher enlisted PISD secondary art specialists to facilitate the instruction. The art specialists were filmed by district Audio-Visual (AV) photography staff in the PISD television studio. The video content was then edited by PISD AV technologists with guidance from the researcher.

The researcher has extensive background in arts teaching and learning, teacher professional development, and curriculum and instruction and was uniquely qualified to create the online course however, it is important to acknowledge that the researchers' administrative position within the district assisted in the course facilitation. Through this position, the researcher was able to enlist district resources to film and edit the instructional videos, to procure art supplies for the participants, and to enlist the assistance of secondary art specialists and content area coordinators.

Design of the Study

This study used an embedded mixed methods research design (Creswell, 2007; Creswell & Plano Clark, 2011) to explore how an online professional development program influenced elementary teachers' use of arts approaches to learning. Embedded mixed methods designs place one type of data within the framework of another approach (Creswell & Plano Clark, 2011). The collection and analysis of the quantitative and qualitative data can occur in any order and one data set acts in a supportive role to the other (Creswell & Plano Clarke, 2011; Zhang, 2011).

This study employed the most common type of embedded design in which a qualitative approach is embedded within a quantitative framework in order to support aspects of the quantitative research (Creswell & Plano Clark, 2011). An embedded design was most appropriate for this study as the researcher had “questions that required different types of data in order to enhance the application of a quantitative design to address the purpose of the study” (Creswell & Plano Clark, 2011, p. 91).

To act as a framework for the qualitative data collection, the researcher employed a case study methodology. A case study is a qualitative research approach that explores a case or *bounded system* through in-depth data collection using multiple data sources (Creswell, 2007). Bounded systems can be any group, individual, collection or population that is of interest (Stake, 1978). Case studies explore issues, situations, or problems within their real-life context and may use both qualitative and quantitative data sources to inform the problem (Yin, 2009). The focus of case study research is to provide a detailed description or analysis of an event, program, or activity through the exploration of a bounded system (Creswell, 2007). A case study was chosen as a framework for the qualitative portion of this study because this approach allowed the researcher to add the existing experience and human understanding of the PD participants (Stake, 1978). The qualitative data was used to corroborate and expand the understanding of the quantitative findings. Figure 3.1 provides the study’s prototypical organization.

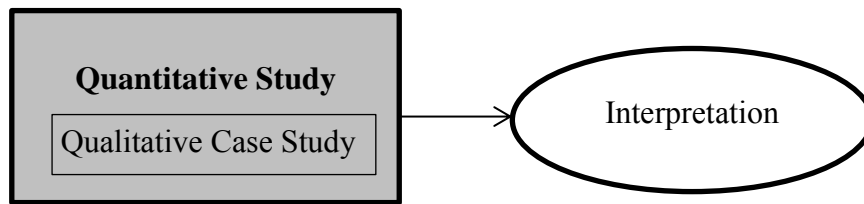


Figure 3.1. Embedded Mixed Methods Prototypical Organization (Creswell & Plano Clark, 2011)

The bounded system for this study was a group of seven teacher participants at Public Elementary School #10 who engaged in an intensive eight week online professional development program. By using a case study methodology embedded within a quantitative approach, a rich and detailed description of how an online arts integrated professional development program affected teacher learning and classroom practice emerged through both the quantitative data and the voices of the PD participants.

Methods

Through an embedded mixed method design, this study examined how an online JEPD program affected elementary teachers' use of arts integrated approaches to learning. Embedded mixed method designs involve the concurrent or sequential collection of both quantitative and qualitative data where one form of data is embedded within the other to support the larger design (Creswell & Plano Clark, 2011). This study embedded a qualitative case study framework within a quantitative approach. The qualitative data was used to support and corroborate the quantitative findings (Creswell & Plano Clark, 2011).

When collecting data in an embedded mixed method design, the researcher must determine the rationale and the timing for embedding the second form of data (Creswell & Plano Clark, 2011). The second form of data can be embedded before, during, or after the primary approach (Creswell & Plano Clark, 2011). Qualitative data collection in this study was embedded during the quantitative study for the purpose of “validating the quantitative outcomes representing the voices of the participants” (Creswell & Plano Clark, 2011, p. 192). While the quantitative and qualitative data sets were collected concurrently, they were collected and analyzed separately in an effort to preserve the integrity of each approach. The data sets were then combined for interpretation.

Two forms of quantitative data were collected as the primary research approach; (1) the Teaching with the Arts Survey (TWAS) (Oreck, 2001) and (2) the Arts Knowledge Assessment. The TWAS (Oreck, 2001) instrument survey items assessed teacher’s attitudes, beliefs, and usage of arts integrated approaches. The Arts Knowledge Assessment assessed participants’ general knowledge of visual arts and drama vocabulary and teaching processes. PD participants (N=7) were administered the TWAS (Oreck, 2001) and the Arts Knowledge Assessment in week one and week ten, before and after engaging with the online program. The TWAS (Oreck, 2001) instrument was also administered to a separate group of participants (N=6) from the same campus who volunteered to complete the survey only (SO).

The embedded case study involved the collection of five forms of qualitative data collected from PD participants (N=7). This data was collected concurrently with quantitative data and embedded within the quantitative study in order to corroborate and

expand quantitative findings. The qualitative data consisted of (1) two open ended response questions on the TWAS (Oreck, 2001) instrument, (2) participants' written reflections, (3) a group interview (4) two individual interviews, and (5) an original lesson plan.

The TWAS (Oreck, 2001) open ended responses were collected in week one and week ten as part of the pre and post TWAS (Oreck, 2001) assessment. Written reflections consisting of email dialogue between the researcher and PD participants and PD participants' postings on the course discussion thread via Project Share (Texas Education Agency, 2012), were collected during the online program from weeks two through nine. The group interview was collected during week four of the online program and the individual interviews and the lesson plan were collected in week ten at the conclusion of the online program.

The entire data collection process occurred over a period of ten weeks, from September 2012 to November 2012. Table 3.1 provides a timeline for the quantitative and qualitative data sets collected from participants within an embedded mixed methods design. The table also illustrates the concurrent data collection process. Following the table is a detailed description and rationale of each instrument.

Table 3.1

Embedded Mixed Methods Data Collection

Data Collection Schedule			
Method	Instrument/Data Type	Participants	Week
Quantitative/Qualitative	TWAS (Oreck, 2001) Survey and open ended response questions	Survey only and PD Participants Pre Assessment	Week 1
Quantitative	Arts Knowledge Assessment	PD Participants	Week 2
Qualitative	Written Reflections email with researcher and discussion thread comments using Project Share (Texas Education Agency, 2012)	PD Participants	Begin week 2 and continue through week 9
Qualitative	Focus Group Interview	PD Participants	Week 4
Quantitative	Arts Knowledge Assessment	PD Participants Post Assessment	Week 10
Qualitative	Original Lesson Plan	PD Participants	Week 10
Qualitative	Personal Interviews	Selected PD Participants	Week 10
Quantitative/Qualitative	TWAS (Oreck, 2000) Survey and open ended response questions	PD Participants Post Assessment	Week 10

Quantitative Data

Two forms of quantitative data served as the primary data sources for the study: the TWAS (Oreck, 2001) and The Arts Knowledge Assessment. The TWAS (Oreck, 2001) assessed teacher’s attitudes, beliefs, and usage of arts integrated approaches. The Arts Knowledge Assessment assessed participants’ general knowledge of visual arts and

drama vocabulary and teaching processes. Both instruments were administered to PD participants in week one as a pre assessment and in week ten as a post assessment. The TWAS (Oreck, 2001) was also administered to SO participants in week one only.

The quantitative data produced from analysis of the TWAS produced two data sets. First, it allowed the researcher to compare PD and SO participants' demographic information and survey responses. This comparison served to identify whether significant differences in initial attitudes and uses of art integrated approaches existed between the PD participants' and the larger teacher population at Public Elementary School #10. This helped to establish a stronger connection between the quantitative results and the professional development program and also allowed for a richer description of PD program participants. Second, it allowed the researcher to define PD participants' attitudes and beliefs regarding arts strategies and quantify their usage of arts in the classroom as well as identify changes to these responses following the implementation of the online program.

The quantitative data produced from the analysis of the Arts Knowledge Assessment data was used to measure changes in PD participants' knowledge of visual art and drama vocabulary and instructional strategies after participating in the online program.

Teaching With the Arts Survey

This study built on the research of Oreck (2004) who found that teachers' primary reported reason for not using arts integrated strategies in the classroom was their lack of self-efficacy with the arts disciplines. The researcher received permission to use

the unpublished TWAS instrument (Oreck, 2001), designed to assess teachers' use of, attitudes about, and past experiences with, arts integrated teaching and learning (Appendix A).

The survey contained nine demographic items, 31 survey items, and two open ended questions. Of the 31 survey items, 23 targeted teachers' attitudes and beliefs and eight assessed teachers' frequency of arts use. The 23 attitude items could be separated into four themes: the importance and value of arts instruction, teacher confidence and self-efficacy with the arts, campus and administrative support for the arts, and constraints or barriers to arts instruction. The eight frequency of use items formed a separate secondary component.

Personal data collected on the survey consisted of nine demographic characteristics including grade level taught, gender, years of teaching experience, previous arts experiences and prior arts teacher professional development. The demographic questions were created by the researcher to suit the needs of this study.

The TWAS (Oreck, 2001) was administered to both SO participants (N=6) and PD participants (N=7) in week one. Each survey was six pages in length and a total of 13 surveys made up the data corpus. The survey was administered to PD participants again, in week ten, following the completion of the online program as a post assessment. One PD participant was absent on medical leave during the post assessment and did not complete the post assessment survey. A total of 6 PD participants completed the post assessment. Pre and post analysis of the TWAS (Oreck, 2001) responses included only the six PD participants who completed both the pre and post assessment. All TWAS

(Oreck, 2001) instruments were administered in paper form and the responses were transcribed into IBM SPSS Statistics 21 for analysis.

The TWAS (Oreck, 2001) was developed based on an extensive literature review and a previous survey instrument entitled Arts in the Classroom developed by Oreck, Baum, and Owen (1999). The TWAS (Oreck, 2001) was tested over a two year period through U.S Department of Education grants. The current version was pilot tested and revised by content experts (Oreck, 2004).

Arts Knowledge Assessment

The Arts Knowledge Assessment included 21 multiple choice questions assessing teacher's general knowledge of visual art and drama vocabulary and instructional strategies (Appendix G). The Arts Knowledge Assessment was designed by the researcher to align with the content covered in the professional development program. PD participants (N=7) were administered the Arts Knowledge Assessment in week one of the online program as a pre assessment. All seven PD participants completed the preassessment with an overall mean of 61.43. In week ten, following the completion of the online program, PD participants were again administered the Arts Knowledge Assessment as a post assessment. All seven PD participants also completed the post assessment with an overall mean of 85.71. Further discussion of this data appears in Chapter Four. Both the pre and post assessments were administered online using the course platform, Project Share (Texas Education Agency, 2012).

Qualitative Data

This study used an embedded mixed methods design in which a qualitative case study was embedded within a quantitative approach. The qualitative case study data was used to support and corroborate the quantitative findings (Creswell & Plano Clark, 2011). Case studies examine issues, situations, or problems within their real-life context (Yin, 2009) to provide a detailed description or analysis of that event through the exploration of a bounded system (Creswell, 2007).

The collection of data in a case study requires multiple sources of data to build an “in depth picture of the case” (Creswell, 2007). For this study, five sources of qualitative data were collected: (1) two open ended responses from the TWAS (Oreck, 2001), (2) PD participants’ written reflections, (3) a focus group interview, (4) two individual interviews, and (5) an original lesson plan.

The qualitative data was collected beginning in week one with the open ended responses to the TWAS (Oreck, 2001) and continued through week ten. Responses to the open ended pre-assessment questions were used to guide the more in depth group and individual interviews. PD participants written reflections, which consisted of open email communications with the researcher and semi structured responses to questions on the online course’s discussion thread, were collected from weeks two through nine. These written reflections provided opportunities for PD participants to voice their real time experiences with the online content and classroom implementation efforts of arts based approaches.

The group interview, conducted in week four, provided an opportunity for PD participants to share their initial collective experience with their learning community. The interview was intentionally scheduled midway through the eight week program to also allow the researcher to identify any issues PD participants might have with the online course materials. Individual interviews were conducted in week ten, following the completion of the online program. The purpose of the individual interviews was to probe more deeply into participants open ended question responses, written reflections, and group interview statements.

The lesson plan, collected in week ten, was the last piece of qualitative data collected. The lesson plan allowed the researcher to see evidence of teacher learning through the PD participants' ability to create an original arts integrated lesson using an instructional strategy or medium covered in the online course.

TWAS Open Ended Questions

The first qualitative data collected for this study were the open ended responses on the TWAS (Oreck, 2001) instrument. This instrument, which contained 31 survey items and two open-ended questions, was administered in week one to PD participants (N=7) and SO participants (N=6) and in week ten to PD participants only.

Responses to question one, "What do you feel is the strongest current motivation for you to use the arts in your teaching?" generated one page of data (Appendix I). All seven PD participants responded to question one during the preassessment and six PD participants responded during the post assessment. Five of the six SO participants also responded to question one.

Responses to question two, “What do you feel would motivate you to use the arts more often than you already do?” generated one page of data (Appendix J). Seven PD participants responded to question two during the preassessment and six responded during the post assessment. Six SO participants also responded to question two.

Written Reflections

Opportunities for reflection, connecting with other learners, and receiving additional support in their areas of need are integral for productive teacher learning (Joyce et al., 2009). As PD participants engaged with the learning modules, they were provided a means for online dialogue and sharing within their learning community and with the researcher regarding the online content and their classroom experiences using the course discussion thread or forum on Project Share (Texas Education Agency, 2012). Project Share forum postings could only be accessed by PD participants using a confidential log in that allowed only PD participants to post, view and respond to each other.

Using the discussion forum, PD participants were asked to respond to questions each week following the classroom implementation of the structured lesson plan. Sample questions included: (1) What did you learn about visual art in the PD sequence? (2) How did the arts experience help your students understand or connect to the science concept? and, (3) What worked and what did not work in the lesson? How did/would you change, improve, or add to it? Flammang (2010) found that opportunities for teachers to talk about how they used classroom materials or how instructional strategies could be modified, coupled with easy to use, adaptable materials, increased teachers’

desire to use them. Participants' postings were collected during weeks two through ten and generated four pages of written data from five of the seven PD participants. Two of the PD participants did not post any responses during the eight week program. Question samples can be found in Appendix B.

In addition, the data corpus of written reflections included email dialogue between the researcher and PD participants. Email communications took place using PISD's employee Outlook accounts that are accessed by private log-ins and protected by PISD's internet security measures. Email communication was unstructured as PD participants were free to communicate with the researcher regarding any topic of their choice. Email communications could not be viewed by any other PD participants. Email communications were collected from week two to week ten and generated six pages of data from all seven PD participants.

Semi-Structured Group Interview

A semi-structured focus group interview was held in week four of the online program. Using a focus group allows the researcher to collect data through the purposeful interaction of participants (McLafferty, 2004). The interview served three purposes: (1) it allowed PD participants to engage in collaborative discussion, (2) it allowed the researcher to collect data on participant's experiences, and, (3) it allowed the researcher to determine whether participants needed additional support with the online program.

Learning theory on the process of change suggests that teachers should have opportunities to reflect on their learning and engage in collaborative group discussion

(Bransford et al., 1999). The group interview served then as an opportunity for participants to discuss the online program, the lesson structure, their learning process, and classroom implementation.

By scheduling the interview in week four, the group interview also allowed the researcher the opportunity to gather data on participants' collective experiences and to receive feedback on any additional support participants might need. As such, the semi-structured group interview served as an extension of the learning in this professional development model in addition to informing the research.

The group interview was facilitated by the researcher. Morgan (1988) contends that ethical concerns regarding the relationship or control of the researcher can be reduced or removed when conducting group interviews since the number of participants works to shift the balance of power from the researcher to the participants. Questions for the group interview were guided by an interview protocol (Appendix C) and developed based on the study's questions (Creswell, 2007) and data collected from the TWAS.

Participants were informed that the interview would be recorded and transcribed. The data corpus of the group interview consisted of 15 pages of data. Participants' identities were protected in the transcription document through the use of assigned participant codes. The interview lasted one hour and was held in the library of Public Elementary School #10 for the convenience of participants.

Individual Face-to-Face Interviews

In week ten, upon completion of the online program, all seven PD participants were asked to volunteer to participate in individual interviews. The individual interviews were collected as one of the final pieces of qualitative data for the purpose of probing deeper into specific questions and participant comments in the open ended responses, written reflections and the group interview. Conducting follow up individual interviews can allow the researcher to “explore specific opinions and attitudes in more depth” (Morgan, 1996, p. 134)

Two of the seven participants agreed to be interviewed. Both interviews took place on campus at the request of the participants. Creswell (2007) states that personal interviews are best when individuals are not hesitant to speak and share ideas and the setting allows this to be possible. One participant chose to be interviewed during her conference period and one participant chose to be interviewed after school. Each interview lasted about 45 minutes and was facilitated by the researcher. The interview questions were guided by an interview protocol (Appendix D) and based on the study’s central and sub questions.

The individual interviews, which were recorded and transcribed, generated 15 pages of data. The interviews allowed the researcher to develop a more complete understanding of PD participants’ personal experiences with the online arts professional development program, their depth of learning, and their classroom implementation efforts.

Original Lesson Plan

The revised version of Bloom's taxonomy (Anderson et al., 2001), places *creation* as the highest order of learning. In order to create, learners must place learned elements together to form a new original product. Participant's conceptual understanding of the content was assessed through the creation of a new lesson or classroom application of one of the arts based strategies or projects covered in the program.

Participants were encouraged to use the lesson plan template that was used as the framework for all the integrated lessons in the program (Appendix H). The lesson plans were collected in week ten of the program. Five of the PD participants created an individual lesson plan while two of the PD participants chose to create a lesson plan collaboratively. The lesson plans and supporting documents consisted of 18 pages of data.

Data Analysis

This study used an embedded mixed methods design to explore how an online job embedded professional development program affected teacher use of arts integrated approaches to learning. A quantitative study served as the primary research approach that was then embedded with a qualitative case study in order to provide a comprehensive understanding of the research questions. In an embedded mixed methods design, three major steps are used in the data analysis process. The primary data analysis, the secondary data analysis, and then further mixed methods analysis to

determine how the secondary data supported the primary (Creswell & Plano Clark, 2011).

Primary Data Analysis-Quantitative

In this study, quantitative sources, the TWAS (Oreck, 2001) instrument and the Arts Knowledge Assessment provided the primary data. Responses on the TWAS survey were used in two separate analyses. Responses of SO participants and PD participants were compared to identify whether significant differences existed. This included a comparison of beliefs and attitudes about arts integrated instruction and frequency of use, as well as demographic characteristics such as prior arts experiences and previous professional development.

Analysis of the attitudes items was completed for each of the four components, importance and value of the arts, teacher confidence and self-efficacy, campus support for the arts, and barriers to arts instruction, and the secondary frequency of use component using independent samples *t*-tests. By comparing responses from SO participants to those of PD participants, the researcher was able to provide a richer description of the PD participants in relation to their peers and establish a stronger connection between any post assessment changes. In addition a Cronbach's alpha reliability test was calculated to test for internal validity.

Secondly, PD participants' pre and post TWAS (Oreck, 2001) responses were compared using descriptive and inferential statistics to assess changes in attitudes or beliefs or teaching practices following the online professional development program. A

dependent samples *t*-test was performed for each of the four themes and the secondary frequency of use component.

Data from participants' pre and post Arts Knowledge Assessment were compared to assess participants' learning of the course objectives related to visual art and drama concepts and strategies. Changes in scores were calculated using a dependent sample *t*-test.

Secondary Data Analysis- Qualitative

The secondary data was collected through a qualitative case study. Qualitative data consisted of the two open ended responses to the TWAS (Oreck, 2001), PD participants written reflections, a group interview, two individual interviews, and a lesson plan.

Written Responses and Interview Data

Qualitative data analysis involves dividing the text into units, assigning a code to each unit, and then grouping the codes into themes (Creswell & Plano Clark, 2011). In this study, the qualitative data analysis process began with the transcription of the group and individual interviews. Participants' written reflections and the two open ended response questions were then compiled with the interview transcriptions and analyzed using a hand coding process. Data was hand coded using a descriptive coding method to identify basic passages of text (Saldana, 2009). Following hand coding, the data was then uploaded into the qualitative CAQDAS software program, Atlas.ti in an effort to identify categories and themes (Creswell, 2007; Saldana, 2009). Themes were identified using the process of pattern coding that searches for similarly coded passages and

develops a statement to describe the interrelated data (Miles & Huberman, 1994; Saldana, 2009). The coding process was cyclical and evolved as the analysis progressed (Saldana, 2009) until three broad themes, *student outcomes*, *teacher self-efficacy*, and *external factors* emerged. Each theme was supported by three sub themes.

Lesson Plan

In addition to the analysis of the written and narrative data, the original lesson plans were analyzed for quality and integrity to an arts integration model through the use of an evaluation rubric designed by the researcher (Appendix D). The Arts Integration Lesson Plan Rubric assessed each lesson plan for six criteria based on the design of rigorous arts integrated curriculum (Whitesett & Franklin, 2011). These criteria included the degree of integration, instructional goals and objectives, instructional activities/strategies, an assessment, the arts application and resources/materials.

While there is no specific agreement on the number of scoring levels in a rubric, Callison (2000) recommends a maximum of four. The Arts Integration Lesson Plan Rubric contained four scoring levels, novice, developing, accomplished, and exemplary, and a detailed explanation of the expectations at each level (Reddy, 2010). Quality rubrics also contain a scoring strategy, or the use of a scale, for interpreting and judging the product (Reddy, 2010). Holistic rubrics judge the product as a whole, while analytic rubrics score each criterion separately and then aggregate the scores together for an overall score (Reddy, 2010). Analytic rubrics are better for providing formative feedback and detailed information on the strengths and weaknesses of a product (Reddy, 2010).

The Arts Integration Lesson Plan Rubric incorporated an analytic scoring system so that each criterion was assessed separately and an overall score determined. Overall score ranges were established based upon the range of scores possible per scoring level. The lowest possible score was a 6 and the highest possible score was a 24. Overall score ranges assigned were 6 to 10 = Novice, 11 to 15 = Developing, 16 to 20 = Accomplished, and 21 to 24 = Exemplary. These ranges were selected to provide a consistent five point range for all levels except the level of Exemplary which spanned a range of only four points.

Mixed Methods Analysis

Creswell and Plano Clark (2011) suggest that three options exist for mixed methods data analysis; side by side analysis, joint display, and a case oriented display. In a joint display, quantitative and qualitative data are displayed in a figure or table so that they can be directly compared (Creswell & Plano Clark, 2011). This study used a category/theme joint display, the most common in merged analysis, which arrays the quantitative categories and statistical results with the themes derived from the qualitative data analysis (Creswell & Plano Clark, 2011). Interpretation involved the identification of similarities or difference in the data sets to corroborate or expand the understanding of the quantitative results. Data sources used to inform the study's central question and sub questions is illustrated in Table 3.2.

Table 3.2

Data Types and Sources by Research Question

Question	Data Type(s)	Collection Method
Central – How does an online job-embedded professional development program affect elementary teachers’ beliefs about and use of arts integrated approaches to learning?	Quantitative Qualitative	TWAS (Oreck, 2001) Arts Knowledge Assessment Written Reflections Interviews Grp. and Ind. Lesson Plan
1. What attitudes and beliefs related to the use of arts approaches in teaching can be identified and interpreted from teachers’ responses on the Teaching With the Arts Survey (TWAS) (Oreck, 2004)?	Quantitative Qualitative	TWAS (Oreck, 2001) Open ended responses Written Reflections Interviews Grp. and Ind.
2. What is the effect on teacher self-efficacy for teaching the arts after engaging in an online professional development program?	Quantitative Qualitative	TWAS (Oreck, 2001) Interviews Online Reflections Interview Grp. and Ind.
3. How are teachers’ knowledge and understanding of arts integration practices affected as a result of using an online program?	Quantitative Qualitative	Arts Knowledge Assessment Online Reflections Interviews Grp. And Ind. Original Lesson Plan

Limitations

This study has four limitations. First, the researcher holds a top-level administrative position within the school district that serves as the context for the study. It is important to acknowledge that while the researcher had no direct supervisory role over the targeted campus or study participants, the stature of this position could have influenced participants’ attitudes or responses either positively or negatively.

Every effort was made to reduce the perception of authority of the researcher by allowing participants to engage in group and individual interviews in areas where they felt most comfortable, such as their classrooms, limiting the number times the researcher visited the campus, and allowing opportunities for open and unstructured dialogue with the researcher through PISD's internal email system. In addition, the group interview helped to reduce the control of the researcher by shifting the balance of power from the researcher to the participants (Morgan, 1988).

Second, in order to encourage participation in the study, as well as facilitate the classroom implementation of the classroom activities, PD participants received arts supplies for use in their classroom. The influence on teacher attitudes, after receiving needed classroom materials, could have had an effect on the resulting data.

Third, the online professional development program was designed almost exclusively by the researcher based on the needs and purpose of the research, the scope and sequence of the PISD C-Scope curriculum documents, and the body of knowledge on best practices for online and job-embedded professional development. The researcher also designed the Arts Knowledge Assessment, one of the primary quantitative data sources, and the Arts Integration Lesson Plan Rubric, used to evaluate and score participants' lesson plans. Neither the online program, the Arts Knowledge Assessment instrument, nor the Lesson Plan Rubric were validated by outside sources as reliable. As such, the reliability and validity of the program and the aforementioned evaluation instruments are in question.

Last, a large sample size improves a studies' generalizability to the larger population (Shadish, Cook, & Campbell, 2002). While the researcher made every effort to improve data reliability and validity through triangulation, the study's sample size is small, and therefore, the findings may not be generalizable to a larger population.

Qualifications of the Primary Researcher

The researcher has 28 years of experience in public schools including 13 years in the classroom as an arts educator, nine years as a secondary administrator, and six years as a district level Fine Arts administrator. The researcher holds a Bachelor of Music from the University of Texas at Austin and a Master's in Educational Administration from the University of Texas-Pan American. The researcher has four year of experience directing a district wide arts integration professional development program. Current research interests include arts education and its impact on learning, arts integrated instructional strategies for the elementary generalist classroom teacher, and online learning in the arts. The goal of the researcher is to improve arts education in elementary schools through the support and development of strong arts programs and by better equipping the elementary generalist teacher to provide quality standards based arts experiences for children.

CHAPTER IV

DATA AND FINDINGS

This purpose of this mixed methods study was to explore how an online job-embedded professional development program affected elementary teachers' use of arts integrated approaches to learning. In addition, the researcher sought to understand the attitudes and issues that influence the use of the arts in education, and teacher learning that occurred as a result of engaging in online professional development. The information gleaned from the study will provide both summative and formative data for PISD to evaluate and improve the overall professional development program. This study is significant because few studies have examined models of arts integrated professional development (Burnaford et al., 2001; Garret, 2010; Oreck, 2004). In addition, the researcher found no examples of studies that examined the effects of an online model of professional development in arts integration.

This chapter provides an analysis of seven sources of quantitative and qualitative data collected to inform the research questions. Quantitative data consisted of the TWAS (Oreck, 2001) instrument demographic data and survey responses and the Arts Knowledge Assessment. Qualitative data consisted of the TWAS (Oreck, 2001) instrument two open ended responses, PD participants' written responses, a group interview, two individual face to face interviews, and an original lesson plan.

Research Questions

The following central question guided the study: how does an online job-embedded professional development program affect elementary teachers' beliefs about and use of arts integrated approaches to learning? Additional questions include:

1. What attitudes and beliefs related to the use of arts approaches in teaching can be identified and interpreted from teachers' responses on the Teaching With the Arts Survey (TWAS) (Oreck, 2004)?
2. What is the effect on teacher self-efficacy for teaching the arts after engaging in an online professional development program?
3. How are teachers' knowledge and understanding of arts integration practices affected as a result of using an online program?

Methodology

The researcher selected a mixed methods approach for this study because previous research on online professional development programs had been criticized for incorporating only objective level assessments and anecdotal evidence to illustrate teacher learning (Dede et al., 2009; Solimeno et al., 2008). This study sought to expand the understanding of teacher learning by giving a voice to the professional development participants through their experiences transferring learning to practice. The qualitative data collected in this study was used to validate and corroborate the quantitative study that consisted of PD participants' pre and post TWAS (Oreck, 2001) survey responses and Arts Knowledge Assessment pre and post assessment data.

While many definitions of mixed methods research exist (Creswell & Plano Clark, 2011), Creswell et al. (2003) offer the following definition:

A mixed methods study involves the collection ... of both quantitative and/or qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research. (pp. 212)

The central premise of mixed methods research is that the use of both quantitative and qualitative data in combination provides a better understanding of the problem than either approach alone (Creswell & Plano Clarke, 2011).

Design of the Study

The researcher chose an embedded mixed methods design that inserted a qualitative case study within a quantitative study (Creswell & Plano Clark, 2011) to explore how an online model of professional development affected elementary teachers' use of arts integrated approaches to learning. The purpose of the case study was to compare and corroborate quantitative findings and to bring greater insight to the research questions than would be obtained through quantitative methods alone (Creswell & Plano Clark, 2011). The qualitative and quantitative data were collected concurrently but analyzed separately to preserve the integrity of each approach (Creswell & Plano Clark, 2011). The data sets were then combined for interpretation.

Participants included seven teachers employed in the PISD at Public Elementary School #10 (PD) who participated in an eight week online professional development

program and extensive data collection process and six teachers from the same campus who volunteered to complete the TWAS (Oreck, 2001) instrument only (SO).

Quantitative data consisted of demographic and survey responses to the Teaching With the Arts Survey (TWAS) (Oreck, 2001) and the Arts Knowledge Assessment. Both the TWAS (Oreck, 2001) and the Arts Knowledge Assessment were collected from PD participants in week one, before the professional development program, and in week ten, after the professional development program. The TWAS (Oreck, 2001) was also administered to the SO participant group in week one. Responses from the survey only (SO) participants formed a basis for comparison between PD participants and the larger teacher population.

Qualitative data consisted of five types: (1) the TWAS (Oreck, 2001) instrument two open ended questions, (2) PD participants' written reflections, (3) a group interview, (4) two individual face to face interviews, and (5) an original lesson plan. The open ended response questions on the TWAS (Oreck, 2001) were collected from both PD and SO participants in week one and from PD participants in week ten as a post assessment.

PD participants' written reflections, which consisted of both email communications between participants and the researcher and participant postings to the online discussion forum using Project Share (Texas Education Agency, 2012), were collected from weeks two through nine. These reflections and communications provided participants real in time support and gave an immediate voice to their individual classroom experiences.

The group interview, conducted during week four of the eight week PD program, involved seven PD participants and allowed participants the opportunity to engage in collaborative discussion while the researcher collected data on their professional development and classroom experiences. Frey and Fontana (1991) state that the group interview can serve as a means to triangulate data collected from other techniques by adding the “voices of multiple subjects.” It can also aid the researcher in gathering a more complete understanding of participants’ experiences as respondents tend to share information in greater depth in a group interview format (Frey & Fontana, 1991).

Individual interviews were conducted in week ten, with two PD participant volunteers, in an effort to probe deeper into questions and issues that emerged from the TWAS survey, written reflections and the group interview. Conducting individual interviews as a follow up to other data collection methods can allow the researcher to explore specific issues or attitudes in greater depth (Morgan, 1996).

The lesson plan, which was the last piece of data collected in week ten, served to illustrate participants’ understanding of the professional development concepts through their ability to create an original arts integrated lesson.

Display of the Data

Quantitative

Two sources of quantitative data informed the study’s questions: the Teaching With the Arts Survey (TWAS) (Oreck, 2001) demographic and survey responses and the Arts Knowledge Assessment. The TWAS (Oreck, 2001) was administered as a pre and post assessment to PD participants and one time only to SO participants. The survey

contained nine demographic items, 31 survey items, and two open ended questions. Data from the TWAS two open ended questions was included with the qualitative data set.

Of the 31 survey items, 23 targeted teachers' attitudes and beliefs and eight assessed teachers' frequency of arts use. Consistent with Oreck's (2004) research, the 23 attitude items were separated into four primary components: the importance and value of arts instruction, teacher confidence and self-efficacy with the arts, campus and administrative support for the arts, and constraints or barriers to arts instruction. The eight frequency of use items formed a separate secondary component.

Since this study built and expanded on the research of Oreck (2000; 2004), the four primary components of the TWAS (Oreck, 2001) instrument ultimately guided the development of the study's research questions, design, and methods. Responses to the TWAS (Oreck, 2001) demographic and survey items informed the research questions by providing descriptive data to compare PD participants and SO teachers at Public Elementary School #10 as well as statistical data to assess changes in PD participants' beliefs and use of arts strategies following the online program.

The Arts Knowledge Assessment was a 21 question objective test designed to assess PD participants' knowledge of visual art and drama vocabulary and instructional processes. This test was administered online to PD participants as a pre and post assessment. The following sections display the quantitative data that was collected from the TWAS (Oreck, 2001) and the Arts Knowledge Assessment.

Teaching with the arts survey. Survey and participant demographic data was collected using the TWAS (Oreck, 2001) instrument (Appendix A). The survey was issued in paper form and responses were transcribed into SPSS for descriptive and inferential statistical analysis. Six survey only (SO) participants and seven professional development (PD) participants completed the TWAS (Oreck, 2001) during week one prior to the onset of the online program. The survey was administered to PD participants again in week ten, following the program, as a post assessment. Only six PD participants completed the post assessment as one participant was on medical leave.

The survey contained nine demographic items, 31 survey items, and two open ended responses. The 31 survey items employed a 5 point Likert type scale. Of the 31 items, 23 were related to teacher beliefs and attitudes about arts instruction and eight were related to frequency and use of the arts in teaching. Consistent with the research of Oreck (2004), the 23 attitude items solicited teacher responses related to four separate primary components: the importance and value of arts instruction, teacher confidence and self-efficacy with the arts, barriers to arts instruction, and campus support for arts instruction. The eight frequency of use items created a separate secondary component.

Primary component one, *the importance and value of arts instruction*, contained nine items and consisted of questions regarding participants' beliefs about the importance of making art as well as exposing students to visual art, theater arts, dance, and music. These items used a 5-point Likert importance scale in which a value of one equaled not important, two equaled of little importance, three equaled somewhat

important, four equaled important, and five equaled very important. For this component, the higher the mean score the more important participants valued the item.

Primary component two, *teacher confidence and self-efficacy with arts instruction*, contained six items related to confidence with facilitating activities in each of the four arts disciplines as well as teachers' overall self-image as a creative or artistic person. These items used a 5-point Likert agreement scale in which a value of one equaled strongly disagree, two equaled disagree, three equaled neither agree or disagree, four equaled agree, and five equaled strongly agree. For this component, a higher mean score indicated participants' felt a higher degree of confidence.

Campus support for arts instruction included three items and was the third primary component of the survey. These items assessed the degree to which participants' perceived support from other teachers and administrators to engage in innovative teaching techniques including the arts. These items used a 5-point Likert agreement scale in which a value of one equaled strongly disagree, two equaled disagree, three equaled neither agree or disagree, four equaled agreed, and five equaled strongly agree. For this component, a higher mean score indicated participants felt a higher perception of support.

The fourth primary component contained five items related to perceived constraints or *barriers to arts instruction*. This component assessed participants' attitudes about issues that could have a bearing on their use of arts approaches such as time, space, classroom management, and curriculum demands. These items used a 5-point Likert agreement scale in which a value of one equaled strongly disagree, two

equaled disagree, three equaled neither agree or disagree, four equaled agree, and five equaled strongly agree. For this component, a lower mean score indicated participants felt less concern regarding barriers to arts instruction. Items include issues such as time, classroom space, curriculum demands, and student behavior issues.

The secondary component regarding arts frequency of use included eight items related to how often teachers reported implementing exposure activities in the arts as well as art making activities in the four arts disciplines. Exposure activities include viewing pieces of artwork or listening to music while art making activities include the production or making of art such as painting or dancing. These items used a 5-point Likert frequency scale in which a value of one equaled never, two equaled rarely, three equaled once a month, four equaled once a week, and five equaled daily. For this component, a higher mean score indicated participants reported a higher degree of use of that type of activity.

Data from the TWAS (Oreck, 2001) instrument was used in two separate analyses that follow: (a) a comparison of PD and SO participant demographic and survey responses, and (b) an analysis of changes in PD participants' pre and post responses.

Comparison of PD and SO participants' demographic and survey responses.

PD and SO participants' demographic information related to previous arts experiences and survey responses for each of the four primary components and secondary component were analyzed for differences using independent sample *t* tests. Independent sample *t*-tests determine whether there is a statistically significant difference between the means of two unrelated groups. The purpose of this analysis was to establish whether PD

participants were more inclined towards the use of the arts than other teachers through previous training or attitudes and beliefs prior to participating in the online program. In addition, each of the four primary and the secondary component of the TWAS (Oreck, 2001) was assessed for internal consistency using Cronbach's alpha.

Demographic data. The nine demographic items collected participant data on gender, classroom grade level, years of total teaching experience and years' experience in the arts as a child, in high school, in college, and in professional development. The data is displayed in Table 4.1.

Of the six SO participants ($N=6$), one taught Kindergarten, one taught first grade, one taught second grade, one taught third grade, one taught fourth grade, and one taught 5th grade. One teacher was male. Their teaching experience ranged from 3-5 years to more than 20 years. All teachers had at least some prior experience in the arts. Five reported experience in music, two reported prior experience in dance, three reported prior experience in visual art and only one reported prior experience in theater/drama. One participant reported prior experience with arts professional development.

A total of seven teachers ($N=7$) actively participated and completed the online professional development (PD) program. Of the seven PD participants, five taught first grade, one taught fifth grade, and one taught a combination of grades three through five. All participants were female. Their teaching experience ranged from 9-12 years to greater than 20 years. All except one of the participants had previous background in the arts. Six of the teachers reported previous experiences in music, some with more than 15 years of training, while only three reported previous training in the visual arts. None of

the teachers reported prior experience in theater/drama. One teacher reported having engaged in extensive professional development in arts strategies. All participants were provided with a code to protect their identities and ensure confidentiality.

Table 4.1

PD Participants and SO Participants' Demographic Data

Type	Part #	Grd level	Gender	Total Teaching	Yrs. Exp. Arts Child	Type	Yrs. Exp. Arts HS	Type	Yrs. Exp Arts College	Type	Total Yrs. Arts (Child,HS, College)	Hours Arts PD
SO	2001	K	F	9-12	0		0		1	A	1	0
SO	2002	1	M	3-5	7	M	4	M	1	M	12	0
SO	2003	2	F	3-5	0		1	A	0		1	0
SO	2004	3	F	3-5	3	D	3	D	0		6	0
SO	2005	4	F	3-5	6	M, A, T	0		1	M, A	7	0
SO	2006	5	F	20+	0		2	D, A	1	D, A	3	12
TOTAL					16		10		4		30	12
Mean					2.67		1.67		0.67		5.0	2.00
PD	1001	1	F	9-12	7	M	4	M	2	A	13	16
PD	1002	1	F	9-12	6	D, M	0		0		6	50
PD	1004	1	F	20+	5	M	4	M	0		9	0
PD	1005	1	F	9-12	0		0		0		0	0
PD	1006	1	F	20+	14	M	3	M	3	M, A	20	0
PD	4001	4/5	F	9-12	11	M	3	M	4	M	18	0
PD	5001	5	F	9-12	3	M, A	4	M	0		7	6
TOTAL					46		18		9		73	72
Mean					6.57		2.57		1.29		10.43	10.29

M = Music, A = Visual Art, D = Dance, and T = Theater/Drama

As children, SO participant's mean years of arts experience was 2.67 compared to PD participants 6.57 years. This reflects a mean difference of 3.9 years. An independent samples *t*-test found the difference to be not significant ($t = (13) -1.711$, $p=n.s.$). In high school, SO participant's mean reported years of arts experience was

1.67 compared to 2.57 years reported by PD participants. The mean difference between the groups reported arts experiences in high school was .90. An independent samples *t*-test found the difference between the two means to be not significant ($t = (13) -.938$, $p=n.s.$). SO participant's mean years of arts experiences in college was .67 compared to PD participants' mean college arts experiences of 1.29 years. This reflects a mean difference of .62 years. An independent samples *t*-test found the difference between the two means to be not significant ($t = (13) -.852$, $p=n.s.$).

SO and PD participants' total years experiences in the arts reflects the sum of their experiences as a child, in high school, and in college. SO participants' mean total years of arts experiences was 5.0 compared to PD participants' 10.43. This reflects a mean difference of 5.43 years. An independent samples *t*-test found the difference between the two means to be not significant ($t = (13) -1.64$, $p=n.s.$). In professional development hours, SO participants reported a mean of 2 hours compared to a mean of 10.29 hours reported by PD participants with a mean difference of 8.29 hours. An independent samples *t*-test found the difference between the two means to be not significant ($t = (13) -1.60$, $p=n.s.$). Table 4.2 illustrates the statistical comparison using an independent sample *t*-test of previous arts experience between SO and PD participants.

The results of the independent sample *t*-tests indicated that although PD participants' mean differences in arts experiences were higher for each variable than SO participants, the difference between the groups was not statistically significant. This

indicates that PD participants were statistically similar to the SO participant group. This is significant because the data suggests that PD participants were not more

Table 4.2

*SO and PD Participants Independent Sample t-test Data
Demographics– Arts Experiences*

Variable	SO Mean (N=6)	Std. Dev.	PD Mean (N=7)	Std. Dev.	<i>t</i> Equal variances	Sig (2 tailed) Equal variances
Yrs. Exp. Arts Child	2.67	3.20	6.57	4.72	-1.711	.115
Yrs. Exp. Arts HS	1.67	1.63	2.57	1.81	-0.938	.368
Yrs. Exp. Arts College	0.67	0.52	1.29	1.70	-0.852	.412
Total Yrs. Arts	5.00	4.24	10.43	7.04	-1.640	.129
Hours of Arts PD	2.00	4.89	10.29	18.49	-1.060	.312

predisposed to the arts than SO participants based on their prior arts experiences. As a result, any differences between PD participants’ TWAS (Oreck, 2001) survey responses are more likely to be attributed to the professional development program.

Survey responses. In addition to a comparison of the demographic data, both SO participant responses and PD participant pre assessment responses to the TWAS survey (Oreck, 2001) were compared. An independent sample *t*-test was calculated for each of the four primary components; (1) the importance and value of arts instruction, (2) teacher confidence and self-efficacy with the arts, (3) campus support for arts instruction, and (4) barriers to arts instruction, as well as the secondary component, frequency of use, to identify significant differences in attitudes or reported use of arts

approaches. An independent sample t-test allowed the comparison of the means of the two unrelated groups. In addition, the internal consistency of each of the four primary components was analyzed using Cronbach's alpha.

Primary component one, *the importance and value of arts instruction*, contained 8 items that assessed participants' beliefs about the importance of making art and exposing students to the arts. This component was found to highly reliable with an alpha of .93. SO participants' mean value for section one was 3.87 compared to PD participants 4.35 on a scale of 5, indicating that PD participants rated arts making and exposure activities as more important than SO participants. An independent sample t-test however, found the difference to be not significant ($t(13) = -1.13, p = n.s.$).

Primary component two, *teacher confidence and self-efficacy for arts instruction*, consisted of six items and assessed participants confidence with facilitating activities in each of the four arts disciplines and participants' overall self-image as a creative or artistic person. The alpha reliability for component two was .68 which indicates a slightly lower reliability for the items assessed. The researcher believes this is due to the variance in participants' confidence within the four arts disciplines. For instance, some participants reported high levels of confidence in one arts discipline but very low levels of confidence in another. PD participants rated themselves slightly more confident than SO participants with a mean value of 3.57 to 3.07, respectively. An independent sample t test found the difference in means to not significant ($t(13) = 1.483, p = n.s.$).

The third primary component, *campus support for arts instruction*, contained only three items and assessed participants' perceived support from other teachers and

administrators to use arts approaches. The alpha reliability for this component was high at .86. PD participants' perceived campus and administrative support for arts instruction to be higher than SO participants with mean values of 4.24 and 3.61, respectively. The difference was not statistically significant however, using an independent samples *t*-test ($t(13) = 1.723, p = n.s.$).

The fourth primary component, *barriers to arts instruction*, contained five items and assessed participants' attitudes about issues that could have a bearing on their use of arts approaches such as time, space, classroom management, and curriculum demands. This component had a high alpha reliability of .75. SO participants perceived more barriers to arts instruction than PD participants with mean values of 2.97 and 2.09, respectively; however, both groups were low overall. The low mean values indicate both the SO and the PD group did not believe time, space, or classroom management were major concerns. An independent samples *t* test found the SO and PD groups did not differ significantly ($t(13) = -2.085, p = n.s.$).

On the secondary component, frequency of use, the SO participants reported using the arts slightly more frequently than PD participants with mean values of 2.60 and 2.34, respectively. This difference was not found to be statistically significant using an independent samples *t*-test ($t(13) = -.957, p=n.s.$). Table 4.3 illustrates the mean values and statistical analysis data for each of the four primary components and the secondary component for SO and PD participants.

The results of the statistical analyses suggest that, although there were differences in the SO and PD participant responses, the two groups were statistically

Table 4.3

*SO and PD Participants Independent Sample t-test Data Pre Assessment
Primary and Secondary Component Comparison*

Primary Components	SO Mean (N=6)	Std. Dev.	PD Mean (N=7)	Std. Dev.	t Equal variances	Sig (2 tailed) Equal variances
Importance and Value	3.87	0.50	4.35	0.93	-1.13	0.282
Teacher Efficacy	3.06	0.85	3.57	0.33	1.483	0.166
Support	3.61	0.68	4.24	0.63	1.723	0.113
Barriers	2.97	0.78	2.09	0.74	-2.085	0.061
Secondary Component						
Frequency of Use	2.60	0.22	2.34	0.64	-.957	0.359

similar. This indicates that PD participants were not significantly different than other teachers at Public Elementary School #10 in their beliefs about the importance of the arts, their confidence and efficacy for arts instruction, their beliefs about the support and barriers for arts instruction, or in their frequency of use of the arts prior to engaging in the online program.

Table 4.4 displays the reliability data of the four primary components using Cronbach’s alpha. The alpha for all components, except teacher efficacy, is high indicating strong internal consistency. The alpha for teacher efficacy is slightly lower due to the variance in teacher confidence with the various art forms.

PD participants' pre and post survey responses. PD participants were administered the TWAS (Oreck, 2001) in week one as a pre assessment survey and in week ten as a post assessment survey in order to measure any changes in their beliefs

Table 4.4

Alpha Reliability Results for Four Primary Components of TWAS (Oreck, 2001) Attitude Items

	N	Items	Alpha Reliability	Variance	SD
Importance and Value of Arts	13	8	0.933	38.41	6.19
Teacher Efficacy	13	6	0.682	14.33	3.78
Campus Support	13	3	0.866	8.97	2.99
Barriers	13	5	0.758	18.43	4.29

and attitudes following the online professional development program. All seven PD participants completed the pre assessment, however, only six completed the post assessment as one teacher was absent due to medical leave. As a result, only the six participants who completed both the pre and post assessment survey responses were analyzed for differences (N=6).

A paired samples *t*-test was calculated for each of the four primary components; (1) the importance and value of arts instruction, (2) teacher confidence and self-efficacy with the arts, (3) campus support for arts instruction, and (4) barriers to arts instruction, as well as the secondary component, frequency of use. A paired samples *t*-test allowed a

comparison of the difference in the means between the two related samples of participants' pre and post assessment scores.

Primary component one. The first primary component, the importance and value of arts instruction, assessed participants' beliefs about the importance of making art as well as exposing students to visual art, theater arts, dance, and music. PD participants' pre assessment mean value was 4.25 and the post assessment mean value was 4.79 on a 5 point scale. These values demonstrate that PD participants found the arts to be highly important as part of the educational experience of students both before and after the online program. While the difference in the pre and post assessment mean reflects a difference of .54, a paired samples *t*-test found the difference was not significant ($t(6) = -1.541, p = \text{n.s.}$). This indicates no statistical difference in participants' beliefs regarding the importance of the arts following the online professional development program.

Primary component two. The second primary component assessed teacher confidence and self-efficacy with arts instruction. Questions measured teacher confidence with facilitating activities in each of the four arts disciplines as well as participants' overall self-image as a creative or artistic person. The pre assessment mean for this theme was 3.55 and the post assessment mean was 3.63. While there was a slight gain, the difference analyzed using a paired samples *t*-test was not statistically significant ($t(6) = -.24, p = \text{n.s.}$). This indicates that there was not a significant gain in participants' reported confidence level with arts instruction in the four arts disciplines following the completion of an online professional development program.

Tables 4.5 and 4.6 illustrate teacher confidence means for each of the four art forms on the TWAS (Oreck, 2001) pre and post assessment. The data shows little change in pre and post assessment means for the individual art forms, however, PD participants felt more confident leading visual arts activities both before and after engaging in the online professional development program.

Table 4.5

Descriptive Statistics for Teacher Efficacy by Art Form Pre Assessment

	N	Minimum	Maximum	Mean	Std. Deviation
Visual Art pre	6	3.00	5.00	4.0000	.89443
Dance pre	6	1.00	5.00	3.6667	1.50555
Theater pre	6	3.00	4.00	3.5000	.54772
Music pre	6	3.00	4.00	3.5000	.54772
Valid N (listwise)	6				

Table 4.6

Descriptive Statistics for Teacher Efficacy by Art Form Post Assessment

	N	Minimum	Maximum	Mean	Std. Deviation
Visual Art post	6	3.00	5.00	4.1667	.98319
Music post	6	3.00	5.00	3.6667	.81650
Dance post	6	1.00	5.00	3.6667	1.50555
Theater post	6	3.00	4.00	3.5000	.54772

Primary component three. The importance of campus and administrative support to engage in arts learning was the third primary component of the survey. Both pre and

post assessment responses revealed participants perceived a high degree of campus and administrative support for using the arts and other innovative teaching techniques. The pre assessment mean value for this theme was 4.16 and the post assessment value was 4.27 reflecting a mean difference of -.11. A paired samples t test indicated the difference between participants pre and post assessment means was not significant ($t(6)=-.468, p=n.s.$). This suggests that participants' beliefs regarding campus and administrative support did not change as the result of an online professional development program.

Primary component four. The fourth primary component contained five items related to perceived constraints or barriers to arts instruction. Items include issues such as time, classroom space, curriculum demands, and student behavior issues. Participants' responses indicated very low levels of concern with time, space, or student behavior issues involved with teaching the arts both before and after engaging in the online program. The overall pre assessment mean for this construct was 2.10 and the post assessment value was 2.20. A paired samples T test indicated the difference in the pre and post assessment means was insignificant ($t(6)= -.207, p=n.s.$).

This suggests that participant beliefs regarding perceived barriers to arts instruction did not change significantly following an online professional development program. While the overall mean values of both the pre and post assessment reflected a very low level of concern with issues of time, space, or classroom disruption, participants did reflect a higher degree of concern over the demands of the curriculum with an overall item mean of 3.50 on a 5 point scale.

Secondary component. The secondary component regarding frequency of use consisted of eight items related to exposure activities in the arts as well as art making activities in the four arts disciplines. Exposure activities include viewing pieces of artwork or listening to music while art making activities include the production of art such as painting or dancing. PD participants overall mean pre assessment survey score for frequency of use was 2.19 and the post survey score was 2.81. The difference using a paired samples *t*-test was not statistically significant ($t(6) = -2.23, p=n.s.$). Both the pre and post assessment mean values place overall arts reported frequency of use between rarely and once a month.

Figures 4.1 and 4.2 display the pre and post assessment results from the comparison of PD participants' reported use of participatory and exposure activities for the four art forms. PD participants' pre and post responses indicate an increase in participatory or *doing* activities in movement, music, and visual arts. Drama showed a slight decrease. Previous research revealed that teachers most frequently reported facilitating visual arts participatory activities (Oreck, 2004). Participants' responses in this study varied from previous studies in that movement activities were reported as the most frequently used participatory activity in both the pre ($M=3.00$) and post assessment ($M=3.83$). Both the pre and post assessment mean values place movement or dance activities on a scale from once a month to once a week. It is unclear whether participants interpreted the term *movement activities* to be the art form of dance or simply using other games and activities involving movement.

PD participants' pre and post reported use of exposure activities showed an increase in all four art forms. In previous research, music was reported as the most frequently used exposure activity (Oreck, 2004). The most frequently used exposure activity in this study was visual art during both the pre (M=2.42) and post assessment (M=2.83).

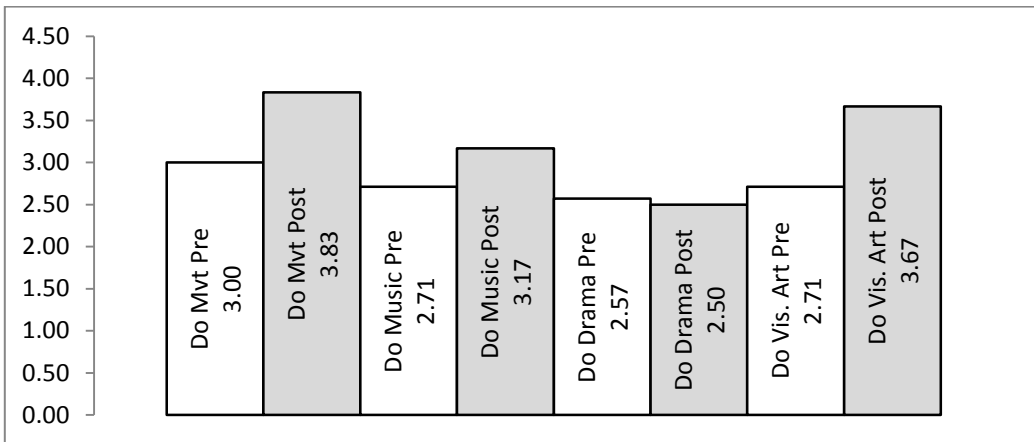


Figure 4.1. PD participants' pre and post assessment means of participatory activities in the four art forms.

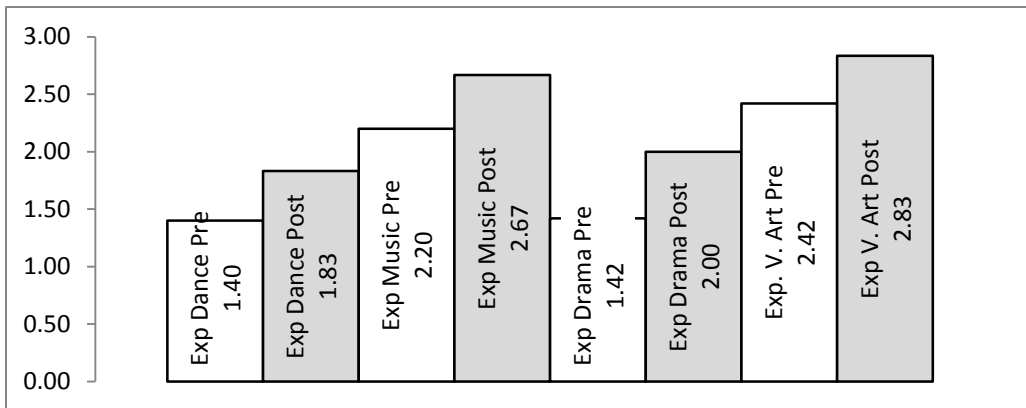


Figure 4.2. PD participants' pre and post assessment means of exposure activities in the four art forms.

Table 4.7 illustrates the pre and post statistical data of PD participants for each of the four primary components and the secondary component of the TWAS (Oreck, 2001) survey items. The data reveals that although there was a mean increase in the overall

Table 4.7

TWAS Pre and Post Statistical Analysis Summary by Component

Primary Components	N	Pre Mean	Std. Dev.	Post Mean	Std. Dev.	<i>t</i>	Sig (2 tailed)
Importance and Value of Arts Instruction	6	4.25	.971	4.79	.245	-1.541	.184
Teacher Confidence/Efficacy	6	3.55	.360	3.61	.361	-.247	.745
Campus and Administrative Support	6	4.16	.657	4.27	.251	-.468	.659
Constraints and Barriers	6	2.10	.807	2.20	.779	-.207	.844
Secondary Component							
Frequency of Use	6	2.19	.553	2.81	.607	-2.236	.076

pre and post mean for each of the four primary components and the secondary component, these gains were found to be not significant using paired samples *t*-tests ($\alpha=.05$). The greatest gain in pre (2.19) and post (2.81) mean values was in the secondary component, *frequency of use*.

Overall, both pre and post assessment mean values indicated that PD participants placed a high value on the arts and felt supported by campus administration to use the arts or other innovative strategies in their teaching. The responses also indicated that PD participants felt low degrees of concern about constraints or barriers to using the arts such as the lack of time or resources, both before and after the online program.

Participants reported frequency of use of art making or exposure activities fell between rarely and once a month on the Likert scale.

Arts knowledge assessment. The Arts Knowledge Assessment was administered to PD participants in week one of the online program as a pre assessment and in week ten as a post assessment. The purpose of the Arts Knowledge Assessment was to examine participants' knowledge regarding visual art and drama vocabulary and processes. Participants accessed the test online using the course platform, Project Share (Texas Education Agency, 2012). Teacher results were generated immediately following completion of the test. All seven PD participants completed both the pre and post assessments.

The overall mean pretest score on the Arts Knowledge Assessment was 61.43 and the overall mean on the posttest was 85.71. The difference between means was large at 24.28. A paired sample *t* test revealed the difference between means to be highly significant ($t(6) = -3.34, p < .05$) indicating that participants' knowledge of visual arts and drama vocabulary and instructional practices improved dramatically. The effect size estimate (*d*) based on the pre assessment standard deviation was 1.43 indicating a gain of nearly one and a half standard deviation from pre assessment test scores.

Table 4.8 illustrates the Arts Knowledge Assessment pre and post scores of each of the seven PD participants. All seven participants showed gains in their pre and post assessment scores with the largest gain for Participant 1002 who scored the lowest on the pre assessment at 22%. Participant 1002 scored an 85% on the post assessment for a gain of 63 points.

Table 4.8

PD Participants' Arts Knowledge Assessment Pre and Post Scores

Teacher Number	Pre test Score	Post test Score	Difference
1001	93.00	100.00	7.00
1002	22.00	85.00	63.00
1005	68.00	90.00	22.00
1006	51.00	70.00	19.00
4001	75.00	80.00	5.00
5001	58.00	85.00	27.00
Mean	61.43	85.71	24.29

The range of PD participants' scores on the pre assessment was large at 71 points indicating a wide variance in participant knowledge. The range of scores on the post assessment narrowed significantly to 30 points on the post assessment indicating more consistency in PD participant knowledge following the online program.

Table 4.9 illustrates the results of the paired samples *t*-test analysis of PD participants' pre and post assessment scores. The results show the difference in PD participants' pre and post Arts Knowledge Assessment scores was highly significant with a *p* value of .016. This indicates that PD participants gained significantly in their knowledge of visual art and drama vocabulary and processes after engaging in the online program.

Table 4.9

PD Participants Arts Knowledge Assessment Pre and Post Analysis

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pre	61.43	7	21.991	8.312
	post	85.71	7	9.322	3.523

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	pre & post	7	.490	.264

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 pre - post	-24.286	19.224	7.266	-42.065	-6.506	-3.342	6	.016

Qualitative

Five sources of qualitative data were collected from PD participants. The five sources consisted of the two TWAS (Oreck, 2001) open ended response questions, PD participants' written reflections, one group interview, two individual interviews, and an original lesson plan. Responses to the two open ended questions on the TWAS (Oreck, 2001) was the first piece of qualitative data collected, in week one, as part of the pre-

assessment. Open ended responses were also collected in week ten as part of the TWAS post assessment. The data corpus for open ended responses was two pages.

Participants' written reflections consisted of PD participants' postings to the course discussion forum on Project Share (Texas Education Agency, 2012) and email dialogue between participants and the researcher. Written reflections were collected during weeks two through ten and produced six pages of data. The purpose of the written reflections was to allow participants to connect with other learners and receive additional support when needed. Joyce et al. (2009) describes these activities as integral for productive teacher learning.

One group interview was conducted in week four of the eight week professional development program. The interview was conducted on the campus of Public Elementary School #10. All seven PD participants attended. The purpose of the group interview was to allow PD participants the opportunity to engage in collaborative discussion about their learning and for the researcher to gather data on PD participants online and classroom experiences. A list of semi structured questions guided the interview (Appendix C) which was recorded and transcribed in its entirety.

Two individual interviews were conducted in week 10 with PD participant volunteers following the completion of the professional development program. The purpose of the individual interviews was to probe deeper into questions and issues reflected within participants written response data and the group interview. Both the individual interviews took place on the participants' campus at their request. A list of semi structured questions guided both the interviews (Appendix D) which were recorded

and transcribed. Following transcription, the data was analyzed and hand coded using a descriptive coding method that identified basic topics of text passages (Saldana, 2009).

Hand coded data was then uploaded into the qualitative CAQDAS software program, Atlas.ti in an effort to identify categories and themes (Creswell, 2007; Saldana, 2009). A theme categorizes a set of data into a group of repeating ideas or patterns of experiences (Saldana, 2009). Themes were identified using the process of pattern coding that searches for similarly coded passages and develops a statement to describe the interrelated data (Miles & Huberman, 1994; Saldana, 2009).

Throughout this process, a codebook was developed that provided a standard to guide the coding of data (Saldana, 2009). Coding was cyclical and evolved as the analysis progressed (Saldana, 2009). Themes and subthemes were revised and collapsed until three broad themes emerged. The broad themes for the study were *student outcomes*, *teacher self-efficacy*, and *external factors*. The theme, *student outcomes*, was supported by the subthemes engagement, learning, and affective factors. The theme teacher efficacy was supported by the subthemes of knowledge and practice. The theme, *external factors*, was supported by the subthemes administrative support, time, and resources. Figure 4.3 provides the codebook that developed throughout the coding process.

Central Question: How does an online job-embedded professional development program affect elementary teachers' beliefs about and use of arts integrated approaches to learning?		
Sub questions:		
<ol style="list-style-type: none"> 1. What attitudes and beliefs related to the use of arts approaches in teaching can be identified and interpreted from teachers' responses on the Teaching With the Arts Survey (TWAS) (Oreck, 2004)? 2. What is the effect on teacher self-efficacy for teaching the arts after engaging in an online professional development program? 3. How are teachers' knowledge and understanding of arts integration practices affected as a result of using an online program? 		
Themes		
Student outcomes	Teacher Efficacy	External Factors
Subthemes	Subthemes	Subthemes
S1:Engagement S2:Learning S3:Affective Factors	E1 Knowledge E2 Practice	X1 Admin. Support X2 Time X3 Resources

Figure 4.3. Qualitative data codebook

All five qualitative data sources were used to inform the themes as well as support and validate the findings. Figure 4.4 illustrates the data sources for each theme.

	TWAS: Open ended questions	Written reflections	Group Interviews	Ind. Interview	Lesson plan
Student Outcomes	X	X	X	X	
Teacher Efficacy	X	X	X	X	X
External Factors	X	X	X	X	

Figure 4.4. Thematic data source matrix

The last qualitative data source was the individual lesson plan that was submitted by PD participants in week ten following the completion of the online program. The lesson plan was scored separately from the other four qualitative data sources using the Arts Integration Lesson Plan Rubric (Appendix E). The Arts Integration Lesson Plan Rubric contained four scoring levels and incorporated an analytic scoring system so that

the six lesson plan criteria were assessed separately and an overall score determined (Reddy, 2010). The six criteria, based on rigorous arts integrated curriculum designs (Whitesitt & Franklin, 2011), were the degree of integration, instructional goals and objectives, instructional activities/strategies, an assessment, the arts application and resources/materials. The purpose of the lesson plan was to provide additional data to understand the online programs impact on teacher learning.

Student outcomes. Oreck (2004) found that teachers strongly believe it is important for students to engage in arts instruction. In his study, teachers cited a wide variety of positive student benefits associated with arts learning and revealed that these benefits were their strongest motivation for including the arts in their teaching (Oreck, 2004).

Qualitative data revealed that the seven PD participants in this study also focused primarily on the student benefits or outcomes associated with implementing arts integrated lessons. This recurrent theme was reflected in four of the five types of qualitative data: the TWAS (Oreck, 2001) open ended questions, participants written reflections, and individual and group interviews. Within the theme, three sub themes emerged; student engagement, learning, and affective factors.

Open ended response question number one on the TWAS (Oreck, 2001) asked participants what they felt was the strongest current motivation to use the arts in their teaching. All seven participants responded they were motivated by their belief that using the arts resulted in positive student outcomes. Three participants wrote students were more motivated when the arts were incorporated and that the arts kept students engaged

in the learning. Three participants felt student comprehension was deepened as the result of arts approaches. One participant felt the arts would also positively affect the way students felt about themselves. These responses provided initial categories that ultimately developed the sub themes for the data analysis.

Throughout the eight week professional development program, PD participants written reflections, which consisted of both email communications and postings on the course discussion forum, overwhelmingly centered on student outcomes. Analysis of the written reflections using CAQDAS software Atlas.ti revealed participants mentioned student outcomes 45 times. By sub theme, PD participants commented ten times regarding the arts effect on student engagement, 19 times related to student learning, and 16 times regarding affective factors.

PD participants also focused heavily on student outcomes during the group and individual interviews. Overall, student outcomes were mentioned 17 times during the group interview. By sub theme, student learning was referenced 13 times and affective factors four times. Engagement was not mentioned during the group interview. In the individual interviews, student outcomes were mentioned 11 times with references to the subthemes of student learning eight times and student engagement three times.

The frequency of participant responses related to student outcomes was analyzed to determine the importance and strength of the responses by subtheme. Data revealed that participants overwhelmingly mentioned student learning as the main outcome of engaging with arts instruction. Participants' responses regarding student learning

included both arts and core subject content. Table 4.10 illustrates the frequency values by subtheme.

Table 4.10

Student Outcomes Frequency Table by Sub Theme

Theme: Student Outcomes					
Sub themes	TWAS Open Q1	WR	Grp. Int.	Ind. Int.	Total
Engagement	3	10		3	16
Learning	3	19	13	8	43
Affective	1	16	4		21
Total	7	35	17	11	80

Table 4.11 illustrates samples of the data collected from the TWAS open ended questions, PD participants written responses, and the group and individual interviews, organized by sub themes, related to student outcomes resulting from the use of arts approaches.

The three comments included in Table 4.11, within the subtheme of student engagement, reflect PD participants’ observations of their students’ increased engagement with subject content when the arts were integrated in their classroom activities. Throughout the qualitative data corpus, PD participants mentioned increased student engagement 16 times. All the comments on student engagement, however reflected participants’ general observations of their students and did not reference specific classroom activities or behaviors. Participant comments are consistent

Table 4.11

Thematic Analysis: Sample of Student Outcome Data by Subthemes

Theme: Student Outcomes		
Subtheme: Engagement	Subtheme: Learning	Subtheme: Affective Factors
I have noticed that when my students are involved in some kind of art activity they seem to be engaged in the learning. (Participant 1005, Written Responses: Email)	I think that it helped the kids better understand the story and the sequence and it was so much more hands on than drawing a web or something like that (Participant 1004, Individual Interview).	They smiled and proudly walked around showing their portrait. I love it because they gain confidence in themselves and it is neat to watch. Today, we are working on our acrostic poem. Overall, the kids love this assignment and are already looking forward to next week and their landscape project (Participant 5001, Written Responses Discussion) Forum).
The students get very engaged and they really enjoy art work. I strongly agree that you can teach through art (Participant 1002, TWAS Open Ended Question #1).	I liked the activity where the kids acted out the words and vocabulary. I did it with 4th grade and then I took it to 5th grade when they were acting out about their vocabulary for science. So I thought, "This could work!", because the kids really, really got it. They were working on the word "friction" and it was funny to see how they were trying to act it out (Participant 4001, Group Interview).	The arts help students ... express themselves, regardless of their language, and it also helps them build self-esteem (Participant 1001, TWAS Open Ended Question #1).
The arts help student be engaged in activities from various content areas (Participant 1001, TWAS Open Ended Question #1).	I firmly believe that if students can visualize what they are learning, then they comprehend much better (Participant 5001, Individual Interview).	I am very grateful to this program because my students are becoming more confident in their work and are proudly displaying it outside my classroom (Participant 5001, Written Responses: Discussion Forum).
	I was shocked at how much the students connected with wanting to learn about color. They were INTO it. They fully enjoyed the experience while learning and discussing patterns. They easily connected the lesson with the outside world (Participant 1006, Written Responses: Discussion Forum).	The honesty the students expressed in their feelings as we looked at the two abstract paintings was incredible. We heard from "it reminds me of a day at the park with my dad" to "it's as scary as a bad thunderstorm", and I was in awe of my students' range of emotions. We spent a good chunk of time discussing their feelings and memories; needless to say, I learned a lot about my students that day (Participant 5001, Written Responses: Discussion Forum).

with research that suggests arts integrated activities increase student excitement, motivation, and investment in learning (DeMoss & Morris, 2002; Eisner, 2002; Fineberg, 1993).

A growing body of research supports the idea that the arts play a critical role in increasing academic achievement (Burnaford et al., 2001; Catterall et al., 1999; DeMoss & Morris, 2002; Fineberg, 1993; Grafton & Cross 2008; Rabkin & Redmond, 2006; Wandell et al., 2008). Participants commented on student learning more than any other student outcome; a total of 43 times within the qualitative data corpus. Most comments referenced specific classroom arts activities. Three of the selected comments in Table 4.11 reflect improvements in science vocabulary, reading comprehension, and pattern recognition while engaging in arts activities. Participant 5001's comment reveals her belief that drawing helps increase student comprehension by providing a means for the student to visualize concepts.

Research also suggests that learning in the arts improves students' expressive skills, self-confidence and personal and social development (Harland et al., 2000). Participant comments related to affective factors such as improvements in self-esteem appeared within the data corpus 21 times. Selections included in Table 4.11 reflect participants' observations that the arts activities were giving students opportunities for self-expression and building their self-confidence.

Teacher self-efficacy. Teacher self-efficacy refers to a teacher's confidence in their ability to be successful with a task (Bandura, 1977). Unfortunately, most teachers lack the self-efficacy to teach using the arts (Garvis & Pendergast, 2010; Oreck, 2004;

Russell & Zembylas, 2007). Powell (2001) suggested this is due to teachers' limited arts background, knowledge, or experience. In order to be successful teaching the arts, teachers need the knowledge, skills, and confidence to teach them (Loucks-Horsley et al., 2003). Teachers' lack of self-efficacy with the arts has been deemed the single greatest barrier to arts implementation (Oreck, 2004).

Within all five sources of qualitative data, the theme of teacher self-efficacy emerged supported by two subthemes: knowledge and practice. The subtheme of knowledge was used to group data related to teacher learning while the subtheme of practice was used to group data related to actual classroom implementation. Qualitative data sources consisted of open ended responses to the TWAS (Oreck, 2001) instrument, PD participants' written responses, the group interview, the individual interview, and the original lesson plan.

Knowledge. Oreck (2004) suggested that the need for additional training in the arts was the most frequently reported concern of teachers. During the first four weeks of the program, responses grouped within the subtheme of knowledge, reflected participants' lack of knowledge or skill. While it was not the most frequently reported concern, initial qualitative data collection in this study supported Oreck's findings. In week one, prior to the onset of the online program, participants' responses to open ended question number two on the TWAS (Oreck, 2001) revealed participants felt they needed additional training and help, particularly in the development of integrated lessons. One participant's comment revealed they would be motivated to use the arts more often if they were more knowledgeable. Another participant reflected they would use the arts

more if they had help integrating art with other subjects. In the group interview, one participant commented about how their lack of knowledge had been a concern prior to beginning the online program. She states, “I was apprehensive because I thought it was a cool thing to do but I wasn’t sure how to go about it. ... I was worried I was going to short change these projects because of the lack of knowledge.”

During weeks five through ten of the professional development program however, comments regarding knowledge shifted to reflect gains in learning. In post assessment responses to the TWAS open ended question, a participant that initially indicated they needed to be more knowledgeable about the arts commented they felt the professional development program had given them the motivation and guidance to continue using the arts in their classroom.

In written reflections, group, and individual interviews, PD participants commented on gains in their knowledge of arts instruction 14 times. One teacher reflected, “After watching the video and doing the lesson on color and movement, I was surprised how fun and easy it is to incorporate drama into a lesson. I was very intimidated until now to incorporate drama”. In an individual interview, a participant stated, “The drama activity was really exciting and I’m more confident now. I will look for more places to put it into my curriculum.” Still another participant wrote, “I learned how it is possible to incorporate drama into every subject, I enjoyed watching the students represent the terms and vocabulary being taught in my class, they had a great time and got a better and faster understanding.”

Oreck (2004) contends that teachers need frequent attempts to experiment with artistic processes and methods in order to improve their self-efficacy. The following written reflection documents a participant developing their knowledge and understanding of an arts process through subsequent attempts. The first segment of the data illustrates the teacher's frustration with their lack of ability to facilitate a lesson on portraiture. On day one she states, "When a teacher cannot get a class to do something, we say that students are not developmentally ready. I would love to hide behind that, but I feel it was my teaching, guiding. First we practiced how to do it several times. Then we tried to draw the person sitting across from us. ...It was a great lesson to introduce the idea. I am glad I did it. It was great for the kids. It was very frustrating for me, however."

On a subsequent day however, the same teacher's reflection reveals how additional practice impacted their understanding of the creation process and facilitated a successful arts experience. She states, "As I have done more portraits, I have learned that you really need to give the students ample time. If you rush them, it does not turn out well. When they first start, the portraits don't look so good. As a teacher, you start to worry. Then, if you just give them time to focus, great portraits come out. Sometimes we are so geared to 20 minute time frames. You must really give them time to work. I have great portraits with acrostic poems about Ben Franklin."

Along with written responses and interview data, the original lesson plan, submitted by participants following the completion of the online course, aligned to the subtheme of teacher knowledge. The original lesson plan served to add to the

understanding of PD participants' learning that occurred as a result of engaging in online professional development. Previous research found no significant differences between face-to-face and online education (Russell, 2001), however, many of the studies cited have been criticized for including only anecdotal evidence (Dede et al., 2009; Solimeno et al., 2008).

The revised version of Bloom's taxonomy (Anderson et al., 2001), places creation as the highest order of learning. In order to create, learners must place learned elements together to form a new original product (Anderson et al., 2001). The PD participants' task was to take one of the previously taught arts strategies or mediums and place it in a new integrated context. A total of six lesson plans were submitted by the seven PD participants as two participants chose to prepare the lesson plan collaboratively. All the lesson plans submitted were varied in the participants' choice of strategy or medium. Table 4.12 illustrates the topics and art process or medium each participant submitted. A sample lesson plan submitted by Participant 1001 can be found in Appendix H.

Lesson plans were scored according to an analytic lesson plan rubric that assessed the plan according to six critical components: level of integration, clear instructional goals and objectives, appropriate instructional activities, an integrated assessment, appropriateness of the arts application, and the inclusion of a resource or materials list (Appendix E). Analytic rubrics provide formative feedback and detailed information on the strengths and weaknesses of a product (Reddy, 2010).

The Arts Integration Lesson Plan Rubric components and levels of competency

Table 4.12

Original Lesson Plan Topics and Arts Processes

	Grd	Topic/title	Subjects	Objective(s)	Art Process or Medium
1001	1st	Piggy Bank Art	Mathematics/ Visual Art	Identify individual coins and value. Create a still life of a piggy bank, do a rubbing of coins about the piggy bank, write names of coins that will go into the piggy bank	Still life, Rubbings/ Crayon
1002/ 1005	1st	Patterns with mosaics	Mathematics/ Visual Art	Use observation skills to create artwork that illustrates a pattern. Create a ceramic tile mosaic	Mosaics/Tile
1004	1st	The Big Race	Language Arts/ Drama	Read the story. Create puppets of characters. Act out the story in proper sequence.	Drama
1006	1st	Sand Paintings	Science/Visual Art	Investigate soil, rocks, and water. Create a sand painting of a landscape of a beach scene. Use a horizon line to illustrate depth.	Landscape/ Colored Sand
4001	3rd	Weather here and there	Science/Visual Art	Observe measure, record and compare weather changes in different locations; Create a landscape of one weather condition with appropriate characteristics	Landscapes/ Watercolor
5001	5th	Adapting to our Environment	Language Arts/Visual Art	Research and use portraiture and poetry to explore the human need to adapt to dire situations. Use imagery skills to draw a portrait of Brian and write an acrostic poem about the characters survival skills.	Portraiture/ Pencil

were based on standards of rigor for arts integrated curriculum (Whitesitt & Franklin, 2011). Each critical component was scored separately on a competency scale of one to four with one being novice, two being developing, three being accomplished, and four being exemplary, with a detailed explanation of the expectations at each level (Reddy,

2010). While there is no specific agreement on the number of scoring levels in a rubric, Callison (2000) recommends a maximum of four. The score of each component was added together to form a combined total score.

The highest possible total score was 24 and the lowest was six. Score ranges were equivalent to the following: 6 to 10 = Novice, 11 to 15 = Developing, 16 to 20 = Accomplished, 21 to 24 = Exemplary. These ranges provided a consistent five point range for all levels except the level of Exemplary which spanned a smaller range of only four points. Table 4.13 illustrates the component scores of the lesson plans submitted by each PD participant.

Table 4.13

Arts Integrated Lesson Plan Rubric Scores

	1001	1002/ 1005	1004	1006	4001	5001	Total
Integration subjects	M, A	M, A	LA, D	S, A	S, A	LA, A	
Integration	4	3	2	2	4	4	19
Inst. Goals/Obj.	4	2	2	3	2	4	17
Activities/ Strategies	4	2	2	4	4	3	19
Assessment	4	3	1	1	4	1	14
Arts App	4	4	4	3	4	2	21
Resources/ Materials	4	3	3	1	3	3	17
Total	24	17	14	14	21	17	

Score Range Equivalents: Novice = 6-10; Developing=11-15; Accomplished=16-20; Exemplary=21-24
 Subject key – M=Math, S=Science, LA=Language Arts, A=Visual Arts, D=Drama

The lowest individual component score was for Assessments with a total of 14 points. This component score was significantly affected as three out of the six lesson plans did not include an assessment. The highest individual component score was for Arts Application which assessed whether PD participants included the original use of an art medium or process to enhance learning in another discipline.

Combined total scores from the lesson plans submitted ranged from 14 to 24 points. Participant 1001's lesson plan scored the highest combined score of 24 falling in the Exemplary range. Two of the participants lesson plans' scored 14 points in the Developing range. The mean combined score for all six lesson plans submitted was 17.83 out of 24, falling in the score range of Accomplished.

Each of the lesson plans submitted was original in the choice of subjects and activities. Without suggestion or direction, participants' choices of foundational subjects for integration were evenly distributed. Two participants integrated visual arts with mathematics, two integrated visual arts with science, one integrated language arts with visual arts, and one integrated language arts with drama. The top two scores on the lesson plan integrated visual arts with math and visual arts with science, respectively. Likewise, the lowest two scores on the lesson plan integrated language arts with drama and science with visual arts, respectively. A growing body of literature suggests all four arts disciplines can be meaningfully integrated into the foundational content areas (Albright, 2012; Burton et al., 2010; Burnaford, et al., 2001; Burnaford, et al., 2007; Deasy, 2002; Dupont, 1992; Hanson, 2002; McDonald, 2010; Rose, 1999; Whitesett & Franklin, 2011). The variety illustrated, through participants' choices of lesson material,

was consistent with the literature. In addition, these choices of subject matter and content appeared to not be related to their overall score and ability to create an arts integrated lesson plan.

Practice. The subtheme of practice referred to the participants' implementation of the arts strategies in the classroom. Research suggests that a teachers' self-efficacy is most significantly impacted through repeated successful experiences (Bandura, 1977). In this online professional development program, PD participants' experienced eight modules that were subsequently implemented in the classroom. To determine the number of successful experiences reported, each participant's written reflection of their classroom implementation experience was categorized as successful or unsuccessful based on their comments. Not all participants completed a reflection for every lesson. Out of a possible 56 lessons, 30 reflections were recorded or 53%. Table 4.14 illustrates the number of reflections that were provided by each PD participant and how that experience was categorized. .

From the reflections submitted, participants reported successfully implementing all or part of the arts lessons 90% of the time. It is unclear what the actual rate of success was for all lessons implemented as no additional data was provided. As PD participants experienced success in implementing arts lessons, comments revealed they began to apply their arts vocabulary and knowledge into other subject areas and contexts or began considering ways in which they wanted to change their teaching practices. One teacher stated, "I think I will be careful and more choosy about my vocabulary. I need to be using art words. I need to be more prescriptive in

Table 4.14

PD Participants Reflection and Implementation Table

Tchr #	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7	Module 10	Module 11
1001	S		S	S	S	S		
1002		S		S				
1004	S		S		NS	S	S	S
1005	S							
1006	S/NS	NS	S	NS		S	S	
4001			S	S	S	S	S	S
5001	S		S		S	S		

S=Successful NS=Not Successful S/NS= Partially Successful

what I am doing and I need to teach art.” The following excerpt provides an example of how one participant described changes in their classroom practices. She states, “I think it’s so interesting that even in math, (we’re doing math facts and we’re coloring in circles) now we use complimentary colors and they go and get the crayons. It’s just addition and subtraction facts but I say, “Remember red? What’s the opposite?” It’s green. So they get their crayons. I mean, even when it’s something daily like with math, we’re incorporating it with everything. So it’s exciting.”

Two other participants made these comments: “I’m going to try to continue to integrate the art as much as possible. It was awesome. Much more hands on. Much more creative. I still think I was able to get the concepts across but in a little bit different manner.” And, “I think it really impacted the story though art and so I’m not going to stop. ... Every day in their journal they make a picture and color it of what they did yesterday. I think it’s really helping.”

External factors. Previous research has established that teachers believe the arts positively benefit students (Oreck, 2004). Despite this belief, however, they rarely use the arts in their teaching (Oreck, 2004). Many factors have been shown to influence a teachers' use of the arts, however, external factors play a major role (Oreck, 2004). A lack of time, materials, and lesson plans, the demands to teach the prescribed curriculum, and administrative support have all been shown to have an impact on the frequency of arts teaching (Oreck, 2004).

The data in this study mirrors previous findings. PD participants' comments regarding institutional or organizational factors that impeded or constrained their use of the arts in their teaching were grouped under the theme *external factors*. Within the theme, three subthemes, administrative support, time, and resources, emerged. Four data sources informed this theme: (1) the second open ended question on the TWAS (Oreck, 2001) instrument, (2) participants' written reflections, (3) the group interview data and (4) the individual interview. . Table 4.15 illustrates samples of the data collected from PD participants, organized by sub themes, related to the external factors that influence their use of arts approaches.

In the group and individual interviews, all seven PD participants expressed confidence in the current administration's support for using arts strategies and innovative teaching techniques. The comments in Table 4.13 are particularly interesting because they indicate that this was not always the case and that previous administrations had questioned or prohibited the use of the arts. The need for administrative approval

reflected in these selected comments indicates administrative support plays a critical role in the use of arts approaches to learning.

The second open ended question asked PD participants what they felt would motivate them to use the arts more often than they already did. The most common response among participants was additional time. Out of seven participants, three felt a lack of time was the most significant factor. In the group and individual interview, the lack of time was mentioned 13 times by five different participants. The selected comments in Table 4.13 reflect participants concern for the lack of time. It is important to note, however, that these responses specifically mention time to plan lessons rather than time to teach the arts.

In the second open ended question on the TWAS (2001), two participants stated they would be motivated to use the arts more often if they had additional materials and resources. Flammang (2010) found that providing teachers with materials that were readily available, easy to use, and adaptable for a variety of situations and learners increased teachers desire to use them more often. It is clear, from PD participants' comments about the lack of time to plan and the lack of lesson resources, that having readily available plans and materials would assist teachers in their use of the strategies. The selected comments, in Table 4.15 within the subtheme of resources, illustrate PD participants concerns with the lack of both art materials and lesson plan resources. The term *materials* was used in all four of the selected comments when referring to both arts supplies and lesson plan resources.

Table 4.15

Thematic Analysis: Sample of External Forces Data by Subthemes

Theme: External Factors		
Administrative Support	Time	Resources
I remember when one principal went down the hall saying “No more coloring!” Well, needless to say, that stopped my art projects after that (Participant 1006, Group Interview).	We have zero planning time. We are bombarded with work and have little time to come up with our own lessons involving art (Participant 1006, TWAS Open Ended Question #2).	I go over the lesson. I know what I’m supposed to do. Take the materials and we do it. If I didn’t have the materials I wouldn’t do it (Participant 4001, Group Interview).
So for me, doing this activity and having the principal actually see it is effective. It validates what we are doing in the classroom. It’s not, we’re just playing, you know? That was another principal that I had. They would go into the classroom and the kids would be drawing and stuff and they would say, “You’re coloring again?” I would say, “Ask them questions, ask them what they’re doing”. If a child can tell you why he’s doing it, then they’re learning. But this makes it ok (Participant 5001, Group Interview).	I really need time to plan and share art activities with my grade level. Time is really an issue, but I think we can modify to do short activities, but that means you have to search for these activities (Participant 1002, TWAS Open Ended Question #2).	Having the lesson material was very helpful, very helpful! It was easy for us to follow but we might add a little twist to it. Are there other C-scope lessons like that? I can see that it would be really beneficial if we could do that (Participant 1004, Individual Interview).
I think also the fact that, since we’re taking the scores, we feel more like, well I feel more comfortable in the class teaching it. So if somebody comes in to observe me, the students are not just like coloring. But they’re actually learning. I feel more comfortable (Participant 1002, Group Interview)	If I had more planning time with my grade level, I feel that we could plan awesome art activities to help engage our students in science and social studies ... reading and math (Participant 1001, TWAS Open Ended Question #2).	Our textbook before this one used to have all the art activities in it. This new one doesn’t. I like that we have the materials already. What has happened before is sometimes I don’t have it and I don’t have time to go buy it or find it so ... if I don’t have it I just don’t do it (Participant 1004, Group Interview).
		Materials... You know there’s just no way I could afford to buy it because it all comes out of my pocket, you know (Participant 1004, Individual Interview).

Data Analysis

This study used an embedded mixed methods design to explore the attitudes and beliefs that influence teachers' use of arts approaches and how an online professional development program in arts integration affected participants' use of arts integrated approaches. An embedded design was most appropriate for this study as the questions required different data types and the researcher sought to enhance the application of the quantitative design to address the purpose of the study (Creswell & Plano Clark, 2011).

In embedded mixed methods designs, the primary data set is analyzed first followed by the secondary data set and the data is merged for interpretation (Creswell & Plano Clarke, 2011). This study embedded a qualitative case study within a quantitative design in order to corroborate and validate the quantitative findings.

Quantitative data sources included the TWAS (Oreck, 2001) instrument and the Arts Knowledge Assessment which were administered as pre and post assessments to seven PD participants that engaged in the online professional development program. The TWAS (Oreck, 2001) was also administered to six participants from the same campus who volunteered to complete the survey only (SO). All seven PD participants completed the TWAS pre assessment but only six completed the post assessment as one participant was on medical leave. All seven PD participants completed the pre and post Arts Knowledge Assessment.

A case study formed the framework for the qualitative portion of the study. A case study framework was chosen as this approach allowed the researcher to add the existing experience and human understanding of the PD participants (Stake, 1978). Five

sources of qualitative data were collected (1) two open ended questions on the TWAS (Oreck, 2001), (2) PD participants written reflections, (3) a group interview, (4) two individual interviews, and (5) a lesson plan. Analysis of the qualitative data sources produced three themes: student outcomes, teacher efficacy, and external factors. The themes identified in the qualitative data were compared with the quantitative data findings to identify relationships and triangulate the results. Table 4.16 illustrates the quantitative and qualitative data sources that combined to inform each research question.

Table 4.16

Mixed Methods Data Analysis Matrix by Research Question

	QUAN: TWAS (Oreck 2001)	QUAN: Art Knowledge Assessment	Qual: TWAS Open Ended Questions, (Oreck, 2001)	Qual: Written Responses	Qual: Group Interview	Qual: Individual Interview	Qual: Lesson plan
Question 1	X		X				
Question 2	X		X	X	X	X	
Question 3		X					X
Central Question	X	X	X	X	X	X	X

Findings

Research Question 1: What Attitudes and Beliefs Related to the Use of Arts

Approaches in Teaching can be Identified and Interpreted from Teachers’

Responses on the Teaching with the Arts Survey (TWAS) (Oreck, 2004)?

Building on the research of Oreck (2004), this question attempted to identify the beliefs and attitudes that have a bearing on teachers’ use of arts integrated approaches

and quantify their self-reported use of arts strategies in the classroom through their responses to the TWAS (Oreck, 2001) instrument. It is important to recognize teacher beliefs regarding a new teaching model in order to fully understand how that model may be implemented in the classroom. Dewey contends that what teachers do in the classroom represents what they believe and know (Dewey, 1933).

The TWAS (Oreck, 2001) instrument consisted of 31 survey items and two open ended questions. Responses to the TWAS (Oreck, 2001) survey items served as the quantitative data source to inform this question. Of the 31 survey items, 23 targeted teachers' attitudes and beliefs and eight assessed teachers' frequency of arts use. Consistent with Oreck's research, the 23 attitude items were organized into four primary components: the importance and value of arts instruction, teacher confidence and self-efficacy with the arts, campus support for the arts, and constraints or barriers to arts instruction. A separate secondary component was formed from the eight frequency of use items.

Responses to the TWAS (Oreck, 2001) two open ended questions served as the sole qualitative data source to inform this question. Open ended question one asked participants "What do you feel is the strongest current motivation for you to use the arts in your teaching?". Open ended questions number two asked participants "what do you feel would motivate you to use the arts more often than you already do." Consistent with an embedded mixed methods approach, the qualitative data derived from responses to the TWAS (Oreck, 2001) open ended questions were used to expand, validate, and

further inform the quantitative TWAS (Oreck, 2001) survey findings for each component.

The participant group in Oreck's (2004) study, *The Artistic and Professional Development of Teachers: A Study of Teacher Attitudes Toward and Use of the Arts in Teaching* consisted of 423 public classroom teachers across six states with varying levels of arts experiences or training. Oreck's sample participants were predominantly female (86.8%) and taught in grades K-6. Participants' in this study consisted of seven PD participants' from Public Elementary School #10. PD participants were female and taught in grades 1st through 5th grade.

The TWAS pre assessment was administered to PD participants in week one, prior to the onset of the online professional development program. The researcher chose to use PD participants' pre assessment data to inform this question in order to provide consistency to Oreck's sample participants. Qualitative data themes were then compared and embedded within the quantitative data to triangulate and validate the quantitative findings. Table 4.17 illustrates the collective quantitative and qualitative data sources and findings that informed this question.

The *importance and value of the arts in teaching* was the first primary component of the TWAS attitude items. This component contained eight items related to making art and exposure activities in the four art forms. PD participants' responses reflected a high mean value (M=4.25 out of 5) consistent with Oreck's findings (M=4.28 out of 5). This value indicates participants placed a high value on the use of the arts in the classroom regardless of other issues, such as a lack of time or curriculum

Table 4.17

Summary Table of TWAS Survey Items (QUAN.) and TWAS Open Ended Questions (Qual.)

Research Question 1: What attitudes and beliefs related to the use of arts approaches in teaching can be identified and interpreted from teachers' responses on the Teaching With the Arts Survey (TWAS) (Oreck, 2001)?		
Data Type	Data Source	Findings
QUAN	TWAS Pre Mean Value	4.25 out of 5 on Primary Component 1: <i>Importance and Value of the Arts</i>
Qual.	Open Ended Question 1, TWAS	All 7 participants believed the arts resulted in positive student outcomes: student engagement (N=3), learning (N=3), affective factors (N=1)
QUAN	TWAS Pre Mean	3.55 out of 5 on Primary Component 2: <i>Teacher Confidence and Self-Efficacy</i>
Qual.	Open Ended Question 2, TWAS	PD participants felt most confident leading visual arts (M=4.00) Two participants commented on the need for additional training or help integrating the arts.
QUAN	TWAS Pre Mean Value	4.16 out of 5 on Primary Component 3: <i>Campus Support</i>
Qual.	Open Ended Question 1, TWAS	No corresponding responses
QUAN	TWAS Pre Mean	2.10 out of 5 on Primary Component 4: <i>Barriers to Arts Instruction</i>
Qual.	Open Ended Question 2, TWAS	3 out of 7 participants commented the lack of time to plan most significantly affected their use of the arts 2 out of 7 participants commented the lack of materials and resources most affected their use of the arts
QUAN	TWAS Pre Mean	2.19 out of 5 on Secondary Component: <i>Frequency of Use</i>
Qual.	Open Ended Question 2, TWAS	No corresponding responses

demands, which may interfere with their use.

Qualitative data collected from PD participants' open ended responses to question number one expanded the understanding of why teachers place a high value on the arts through participants own words. All seven PD participants expressed they were motivated to use the arts because they believed they resulted in positive student

outcomes. Three participants believed the arts positively affected students' level of engagement while three others felt the arts positively affect student depth of learning. One participant felt the arts positively affected students' self-esteem (affective factors).

Teacher confidence and self-efficacy was the second primary component of the TWAS attitude items. This component contained six items related to teachers' self-reported confidence in leading activities in the four art forms as well as their overall sense of themselves as creative or artistic. PD participants mean value (M=3.55 out of 5) was slightly higher than participants in Oreck's study (M=3.12 out of 5) but still does not reflect a high level of confidence with the four art forms. Participants felt most confident leading visual arts activities (M=4.00).

Qualitative data collected from PD participants open ended responses was consistent with the quantitative findings that indicated participants were not highly confident in their ability to facilitate arts instruction. Participant 5001 indicated they would be more motivated to use the arts if they were more knowledgeable. Participant 1004 indicated a more specific need for help integrating the arts with other subjects. These responses were consistent with Oreck's findings indicating teachers felt they needed more training to gain skills and self-efficacy with arts instruction. In Oreck's study, however, a lack of self-efficacy was the most frequently mentioned response while it was the second most frequent response in this study.

The third primary component of the TWAS instrument was *campus support for the arts*. This component contained three items and assessed teachers' perceptions of support from administration and other faculty for the use of innovative or creative

teaching strategies. PD participants' mean value reflected a higher perception of support (M=4.16 out of 5) than Oreck's findings (M=3.98 out of 5) however PD participants in this study represented only one campus compared to Oreck's multi district sample. No qualitative data from the open ended responses corresponded to this component.

Barriers to arts instruction was the fourth primary component of the TWAS instrument. This component contained five items and assessed teacher beliefs about issues that impact or impede the use of the arts in the classroom such as time, space, discipline issues, or curriculum demands. PD participants' responses indicated a relatively low level of concern with these barriers with a mean of 2.10 out of 5. This reflects a lower degree of concern than participants in Oreck's study (M=2.75 out of 5). PD participants did reflect a high degree of concern, however, over the demands of the curriculum with an overall item mean of 3.50 on a 5 point scale.

Qualitative data from responses to TWAS (Oreck, 2001) open ended question two were somewhat inconsistent with the quantitative findings that reflected low levels of concern with a lack of time and materials. Three out of seven participants mentioned time as the issue that significantly impacted their ability to use the arts in the classroom. It is important to note that participants clearly mentioned the lack of time to plan rather than time to teach the arts. Two out of the seven participants commented that the lack of materials and resources most significantly affected their use of the arts. Participants in this study tended to use the term *materials* interchangeably when referring to lesson plans and curricular resources and when referring to art materials.

The researcher believes the inconsistency in the two data sources is due to the way the questions appeared in the TWAS (Oreck, 2001) instrument. PD participants open ended responses clearly indicated they were constrained by time to plan rather than with time to teach. However, the question related to time on the TWAS stated, “I feel that I don’t have enough time to teach the arts along with the rest of the curriculum.”

Additionally, there was not a specific question on the TWAS instrument related to having a lack of materials. As a result, quantitative survey responses indicating low levels of concern about barriers to arts instruction provided an incomplete understanding of participants’ real classroom experiences. In this case, the embedded qualitative data provided by participants open ended responses clearly expanded and clarified the quantitative findings.

The secondary component of *frequency of use* of the arts contained eight items related to how often teachers implemented art making activities (drawing or acting) and exposure activities (watching a play) in the four arts disciplines. PD participant mean values indicate a low level of frequency (M=2.19 out of 5) which corresponds to between rarely (2) and once a month (3). This mean value was lower than the participants’ in Oreck’s study (M=2.63 out of 5).

Prior research indicated visual arts was the most frequently reported participatory arts activity of classroom teachers (Oreck, 2004). PD participants in this study indicated dance was the most frequently used participatory activity (M=3.83), however the researcher feels the survey item was unclear. Specifically, the question stated “how frequently do you lead a movement activity with your students”. The researcher is

unsure whether participants interpreted *movement activities* to be dance activities or other activities involving movement such as children's games. Visual art was the second highest reported participatory activity with a mean of 3.67. The highest reported exposure activity was visual art with a mean of 2.83.

Overall, the findings in this study are consistent with the findings of Oreck (2004). Oreck found that while teachers feel the arts are important, they rarely use them in their teaching (Oreck, 2004). PD participants placed high values on the arts as a means to positively affect student engagement, student learning, and student affective factors, however their reported use of the arts is very low reflecting frequencies between rarely to once a month. Some participants voiced that having additional help or knowledge about the arts would help motivate them to use the arts more but the most frequently reported concern or barrier to arts instruction was having time to plan art lessons.

Research Question 2: What is the Effect on Teacher Self-Efficacy for Teaching the Arts after Engaging in an Online Professional Development Program?

This question explored the effect on teacher self-efficacy for teaching the arts after engaging in an online professional development program. The TWAS (Oreck, 2001) instrument served as the primary quantitative data source. Four additional qualitative data sources; (1) open ended question #2 TWAS (Oreck, 2001), (2) PD participants' written reflections, (3) a group interview, and (4) two individual interviews were used to further inform the research question.

The TWAS (Oreck 2001) instrument consisted of 23 attitude items organized into four separate components: the importance and value of arts instruction, teacher confidence and self-efficacy with the arts, barriers to arts instruction, and campus support for arts instruction. Analysis of the qualitative data sources also revealed three major themes: student outcomes, teacher efficacy, and external factors.

Quantitative data from the TWAS (Oreck, 2001) primary component two, *teacher confidence and self-efficacy*, and qualitative data for the corresponding theme *teacher efficacy*, were combined to inform this research question. Following an embedded mixed methods design, the qualitative data was used to further inform and validate the quantitative results. Table 4.18 provides a summary of the quantitative and qualitative data findings that combined to inform research question two.

Previous research suggests that a lack of self-efficacy is the greatest barrier to the use of the arts in the classroom (Oreck, 2004). Analysis of PD participants' pre and post TWAS (Oreck, 2001) survey data produced a preassessment mean of 3.55 and a post assessment mean of 3.61. While there was a mean increase, the difference was not statistically significant ($t(6) = -.24, p = n.s.$) indicating there was not sufficient evidence to submit that teachers felt more confident teaching arts lessons after engaging in an eight week online professional development program.

Qualitative data in the form of participant responses to the TWAS open ended questions, written reflections, group and individual interviews were not consistent with the quantitative findings. Participant 1005's pre assessment response to TWAS (Oreck, 2001) open ended question two indicated she felt the need for additional

Table 4.18

Summary Table of Primary Component Two (QUAN.) and Teacher Efficacy Theme Data (Qual.)

Research Question 2		What is the effect on teacher self-efficacy for teaching the arts after engaging in an online professional development program?
Data Type	Data Source	Findings
QUAN	TWAS Pre and Post Values	3.55 Pre mean value <i>Teacher Confidence and Efficacy</i> 3.63 Post mean value <i>Teacher Confidence and Efficacy</i> The difference in PD participants pre and post mean value was not significant ($t(6)=-.24, p=n.s.$) PD participants felt most confident leading visual arts before (M=4.00) and after the PD program (M=4.17)
Qual.	Open Ended Question 2, TWAS	Pre Assessment: Participant 1005 commented on a lack of knowledge and participant 1004 commented they needed help integrating the arts Post Assessment: No participants commented on the lack of knowledge of need for training. Participant 1005 commented they now felt they had the motivation and guidance to continue to incorporate the arts.
Qual.	Written Reflections	Participant written responses reflected a 90% success rate implementing the arts integrated lessons.
Qual.	Group Interview	Five participants made 12 comments that reflected gains in learning and efficacy with the strategies.
Qual.	Individual Interviews	Two participants made 18 comments that reflected gains in learning and application of the strategies. Participant 1004 indicated success with arts instruction was made possible by the use of the instructional videos.

knowledge. In Participant 1005’s post response, however, she stated she now felt she had the motivation and guidance to continue using the strategies. In addition, no participants indicated additional knowledge would motivate them to use the arts more as was indicated in the pre assessment.

Bandura (1977) suggests that performance accomplishment, or the degree to which one is successful with a task, is believed to have the greatest effect on an individual's self-efficacy. Participants written responses indicated they experienced a 90% degree of success implementing the arts lessons. Additional written responses, as well as comments from group and individual interviews, indicated participants had gained confidence and were learning how to implement the strategies in the classroom. Participant 1006 states, "...on Friday afternoons I would sometimes have them paint but there really wasn't much of a purpose. It was more about exploring. I didn't teach about the colors or talk about blending or anything. But now with doing the stuff like this. It's like OK, we can completely forget about doing that [anymore]. I mean there's nothing wrong with allowing children to explore ... but really you can give it so much more purpose and meaning and it's so much better."

The researcher believes that an explanation for the disagreement in the two data sets can be found in the use of the instructional videos. The instructional videos were an integral part of the online professional development experience. These videos presented arts specialists demonstrating a specific arts strategy, product, or medium. The intent of the videos was to instruct teachers in arts processes through arts experiences. While participants viewed the videos and engaged with the materials on their own, they also relied heavily on the videos in the classroom as an instructional tool, starting and stopping it to give students further instruction or replaying the video as needed.

Participants' comments revealed they felt confident leading the art making activities with this support. Participant 1004 indicated in an individual interview that the

videos made the difference in the successful implementation of the lessons. As a result, while teachers' comments and reported successful experiences seem to suggest their self-efficacy was positively affected, it is likely this was primarily due to the use of the videos as an instructional support.

Despite the fact that teachers experienced a great degree of success with the arts activities, the researcher found very little or no effect on teacher's self-efficacy for teaching the arts after engaging in an online professional development program based on participants' TWAS responses. Changes in teacher practices take time and persistence (Loucks-Horsley et al., 2003) and teachers need frequent opportunities to experiment with artistic processes and methods (Oreck, 2004). While no significant change was evident, it is likely that the program was not long enough to effect any real change in teacher efficacy. The use of the instructional videos for teacher support was an unexpected result. Providing instructional supports through video, which could scaffold teachers towards greater autonomy, could be a model for future online professional development in the arts.

Research Question 3: How are Teachers' Knowledge and Understanding of Arts Integration Practices Affected as a Result of using an Online Program?

In order to teach effectively, teachers need to possess the knowledge and skills associated with the subject content (Loucks-Horsley et al., 2003). This question explored how teachers' knowledge and understanding of arts teaching approaches were affected as a result of using an online program. The Arts Knowledge Assessment served as the primary quantitative data source. One qualitative data source served to further inform

and validate the quantitative results. The qualitative data source was original arts integrated lesson plans submitted by PD participants. Table 4.19 provides a summary of the quantitative and qualitative findings that were combined to address research question three.

Table 4.19

Summary Table of Arts Knowledge Assessment Data (QUAN.) and Original Lesson Plan Scores (Qual.)

Research Question 3		
How are teachers' knowledge and understanding of arts integration practices affected as a result of using an online program?		
Data Type	Data Source	Findings
QUAN.	Arts Knowledge Assessment	The difference in PD participants pre and post mean score was highly significant (t(6)= -3.34, p < .05)
Qual.	Original Lesson Plans	Mean Rubric Score for PD participants 17.83 out of 24 Range = Accomplished

The Arts Knowledge Assessment was a 21 question objective test that assessed basic vocabulary and processes of visual art and drama. A dependent sample *t* test on pre and post differences in Arts Knowledge Assessment scores revealed significant growth in the learning of participants with a mean difference of 24.29 points. The difference in participants' scores before and after engaging in the online professional development program was highly significant with a *p* value of .016 ($\alpha=.05$). This indicates that participants were successful in learning the basic visual arts and drama vocabulary and processes using an online professional development program.

While the quantitative data does suggest that participants' knowledge of arts integrated practices was positively affected, the scores were based on an objective assessment and failed to assess participants on more conceptual understandings. Previous research revealed that prior studies of online programs have provided little more than anecdotal evidence (Dede et al., 2009; Solimeno et al., 2008) and have failed to cite evidence of conceptual learning or change in teacher practice (Dede et al., 2009).

The revised version of Blooms taxonomy places application as the third of six levels of learning and creation at the highest level (Anderson et al., 2001). To assess participants for conceptual understanding, an original arts integrated lesson plan was collected from PD participants. PD participants' task was to take one of the previously taught arts strategies or mediums and apply it to a new integrated context. The plans were scored using The Arts Integrated Lesson Plan Rubric (Appendix E). Scores ranged from 14 - Developing to 24 - Exemplary. The mean score of the six lesson plans submitted fell in the range of Accomplished. Overall the lessons were creative, rigorous and engaging. Three participants lost the majority of points for omitting an assessment.

It is interesting to note that participants' previous arts experience appeared to be unrelated to their lesson plan score. Participants' demographic responses on the TWAS (Oreck, 2001) revealed that all but one participant had previous experience in the arts. Participant 1001, 1006, and 5001 reported two or more years of experience in visual art and participant 1002 reported 6 years of experience in drama. Participant 1002 also reported participating in more than 50 hours of arts professional development. All but one participant reported prior experience in music, some with more than 20 years.

Participant 1006 with the highest total years' of experience in the arts scored one of the lowest cumulative scores, in the range of developing, while participants' 1002 and 1005, who reported the least amount of prior experience in the arts, scored in the range of accomplished. The researcher believed this may have been due to their choice to collaborate on the project.

For research question three, the qualitative data supports the quantitative finding that PD participants' knowledge of arts integrated practices was positively affected after engaging in an online professional development program. In addition, the researcher believes that the qualitative data, the lesson plan, expanded the understanding of the quantitative results. The combination of data types suggests that teachers' knowledge and understanding was affected at a level beyond basic concepts and terms.

Central Question: How does an Online Job-Embedded Professional Development Program Affect Elementary Teachers' Beliefs About and Use of Arts Integrated Approaches to Learning?

Responses to the TWAS (Oreck, 2001) instrument 23 attitude and frequency of use items served as the primary quantitative data source to inform this question. The 23 attitude items were separated into four primary components: *the importance and value of arts instruction, teacher confidence and self-efficacy with the arts, campus support for the arts, and constraints or barriers to arts instruction*. A separate secondary component was formed from the eight *frequency of use* items. Pre and post analysis of the primary component, *teacher confidence and self-efficacy with the arts*, was addressed separately within research question two and was not repeated in the analysis

for the central question. The analysis of the three remaining primary components and secondary component was calculated using dependent sample *t*-tests.

Four sources of qualitative data were used to further inform and validate quantitative findings: (1) the open ended responses to the TWAS (Oreck, 2001), (2) PD participants written responses, (3) the group interview, and (4) the individual interview. The researcher embedded qualitative data within the corresponding components of the TWAS (Oreck, 2001) instrument to interpret the findings and inform the research question. . Table 4.20 provides a summary of the combined quantitative and qualitative data findings organized by the primary and secondary components derived from the TWAS (Oreck, 2001).

Table 4.20

Summary of Quantitative and Qualitative Findings for the Central Question

QUAN	TWAS Pre and Post Values	4.25 Pre mean value 4.79 Post mean value <i>Importance and Value of Arts Instruction</i> The difference in PD participants pre and post mean value was not significant ($t(5)=-1.541, p=n.s.$)
Qual.	Open Ended Question 1, TWAS	Pre Assessment: All 7 participants believed the arts resulted in positive student outcomes: student engagement (N=3), learning (N=3), affective factors (N=1) Post Assessment: All 6 participants commented students were positively affected from the arts lessons: 2 participants stated learning was enhanced, 4 participants stated students were more actively engaged with the content
Qual.	Written Reflections	Participants commented on student outcomes 45 times engagement (10), learning (19), affective factors (16)
Qual.	Group Interview	Participants mentioned student outcomes 17 times: learning (13), affective factors (4)
Qual.	Individual Interviews	Participants mentioned students 11 times, learning (8), student engagement (3)

Table 4.20 *continued*

QUAN	TWAS Pre and Post Values	4.16 pre and 4.27 post mean values <i>Campus Support for Arts Instruction</i> The difference in PD participants pre and post mean value was not significant ($t(5)=-.468, p=n.s.$)
Qual.	Open Ended Question 1, TWAS	No corresponding responses
Qual.	Written Reflections	No corresponding responses
Qual.	Group Interview	Four participants indicated they felt supported by current administration but had not in the past. Support of campus administration was indicated as critical to teachers' use of arts strategies.
Qual.	Individual Interviews	Two participants indicated they felt highly supported by current administration. One participant stated they had not in the past and this had impacted their use of arts approaches.
QUAN	TWAS Pre and Post Values	2.10 pre and 2.20 post mean values – <i>Barriers to Arts Instruction</i> The difference in PD participants pre and post mean values were not significant ($t(5)=-.207, p=n.s.$)
Qual.	Open Ended Question 2,	Pre Assessment: 3 out of 7 participants commented the lack of time to plan most significantly affected their use of the arts; 2 out of 7 participants commented the lack of materials and resources most affected their use of the arts Post Assessment: 2 participants commented time to plan was still a concern
Qual.	Written Reflections	No corresponding responses
Qual.	Group Interview	Four participants indicated the lack of time to plan lessons made it difficult to use the arts in the classroom.
Qual.	Individual Interviews	Participant 1004 indicated lack of time and materials (in that order) most significantly impacted their use of arts approaches.
QUAN	TWAS Pre and Post Values	2.19 pre 2.81 post mean values – <i>Frequency of Use</i> The difference in PD participants pre and post mean values were not significant ($t(5)=-2.23, p=n.s.$) The most frequently reported participatory activity pre and post was movement (dance). The most frequently reported exposure activity pre and post was visual art.
Qual.	Open Ended Question 2, TWAS	Participants 1006 commented they will incorporate art more as they think of it.
Qual.	Written Reflections	No corresponding responses
Qual.	Group Interview	Participant 4001 described the changes in her classroom practice
Qual.	Individual Interviews	Participant 1004 indicated they were going to be more intentional about teaching the arts in the future

Analysis of the first primary component, *the importance and value of the arts*, produced a pre assessment mean of 4.25 and a post assessment mean of 4.79. While there was a mean increase, the difference was not statistically significant ($t(6) = -1.541$, $p = n.s.$) indicating there was not sufficient evidence to submit that teachers beliefs about the importance of the arts changed significantly after engaging in an eight week online professional development program. High mean values on both the pre assessment and post assessment, however, indicated that teachers placed an extremely high value on arts instruction before and after the online professional development program.

Qualitative data derived from the theme *student outcomes* expanded the understanding of the quantitative findings by providing insight into why teachers placed such a high value on the arts. Research on teacher change indicates that changes in practice come after teachers' observe positive student outcomes (Guskey, 2002; Loucks-Horsley, 2003). Responses to the open ended questions on the TWAS (Oreck, 2001) pre assessment indicated that teachers believed the arts positively affected student engagement, learning, and affective factors. Responses on the post assessment were reflective of teacher's actual classroom experiences after implementing arts lessons.

Their responses were extremely positive with all six respondents indicating student engagement (N=4) and student learning (N=2) had been positively affected. Participant 1001 stated, "The arts help students be engaged in activities from various content areas. Students can express themselves regardless of their language and it also helps them build self-esteem." Participant 1006 commented, "It is so great for the students. It broadens their world, ideas, and thinking."

Combined written response, group interview, and individual interview data revealed participants commented on positive student outcomes resulting from the students' work with the arts lessons 73 times. Analysis of the strength and importance of participant responses overall indicated participants overwhelmingly mentioned student learning as the most observed outcome of engaging with arts lessons with a total frequency of 45 responses. Increased engagement was mentioned 20 times and affective factors was mentioned 21 times.

Analysis of the TWAS (Oreck, 2001) primary component *campus support for arts instruction* produced a pre assessment mean of 4.16 and a post assessment mean of 4.27. While there was a mean increase, the difference was not statistically significant ($t(6) = .468, p = n.s.$) indicating there was not sufficient evidence to submit that teachers' perceptions about campus and administrative support changed significantly after engaging in an eight week online professional development program. High pre and post mean values indicate, however that participants at Public Elementary School #10 felt they have the support to engage in arts instruction and other innovative teaching techniques.

No examples of qualitative data corresponding to the theme of *campus support* were found within open ended question responses or PD participants written reflections however, qualitative data collected from the group and individual interviews was consistent with the quantitative findings. Four participants indicated they felt supported by the current administration but had not with past administrators which had significantly impacted their use of the arts in the classroom. In an individual interview a

participant stated, “I remember when one principal went down the hall saying “No more coloring!” Well, needless to say, that stopped my art projects after that.” Support by administration was indicated as a vital component for the use of arts in teaching.

Analysis of the primary component, *barriers to arts instruction*, produced a pre assessment mean value of 2.10 and a post mean value of 2.20. While a mean increase was reflected, the difference was not statistically significant ($t(6)=-.207, p=n.s.$) which indicates there was not sufficient evidence to suggest that PD participants attitudes about barriers to arts instruction were changed as a result of engaging with an online professional development program. Both pre and post mean scores indicate very low levels of concern with barriers or constraints for the use of the arts.

Qualitative data from responses to pre and post TWAS open ended question two were inconsistent with the quantitative findings that reflected low levels of concern with barriers to arts instruction. Three out of seven participants mentioned a lack of time as the issue that most impacted their ability to use the arts in the classroom in the pre assessment. Two participants commented on the lack of time to plan in the post assessment. It is important to note that participants clearly mentioned the lack of time to plan rather than time to teach the arts. Participant 1001 commented, “If I could have more time, uninterrupted time to plan for all of my subject areas with my colleagues. We could bounce ideas and activities with one another for all our content areas.” In contrast, two out of the seven participants commented in the pre assessment that the lack of materials and resources most significantly affected their use of the arts. Participants

in this study tended to use the term *materials* interchangeably when referring to lesson plans and curricular resources and when referring to art materials.

Similarly, five participants voiced concerns about a lack of time in both the individual interview and group interview. Participant 1006 stated, “We have zero planning time. We are bombarded with work and have little time to come up with our own lessons involving art.” In one of the individual interviews, a participant stated, “the time to figure out what to do and the cost materials, in that order, are the two biggest barriers to arts integration.”

The researcher believes the inconsistency in the quantitative and qualitative data sources for this primary component, *barriers to arts instruction*, is due to the way the questions appeared in the TWAS (Oreck, 2001) instrument. Specifically, the TWAS (Oreck, 2001) instrument questions only assessed teachers’ perceptions of barriers to actually teaching the arts. There were no items regarding planning time or materials. As a result, the quantitative findings indicating low perceptions of concern about *barriers to arts instruction* do not provide a complete picture of participants’ real classroom experiences. In this case, the embedded qualitative data provided by participants open ended responses and interview data clearly expanded and clarified the quantitative findings.

Analysis of data for the secondary component *frequency of use*, produced a mean pre assessment value of 2.19 and a post assessment value of 2.81. While there is a mean increase, the difference is not statistically significant at the .05 level ($t(5)=-2.23$, $p=n.s.$) which indicates a frequency of use for arts approaches at a very low level of between

rarely and once a month. Prior research indicated visual arts was the most frequently reported participatory arts activity of classroom teachers (Oreck, 2004). PD participants in this study indicated dance was the most frequently used participatory activity both pre (M=3.00) and post (M=3.83), however the researcher feels the survey item was unclear.

Specifically, the question stated “how frequently do you lead a movement activity with your students”. The researcher is unsure whether participants interpreted *movement activities* to be dance activities or other activities involving movement such as children’s games. Visual art was the second highest reported participatory activity with a post mean of 3.67. The highest reported exposure activity was visual art with pre and post means of 2.42 and 2.83, respectively.

Qualitative data appeared inconsistent with the quantitative findings. While the quantitative results indicated little change in participants reported frequency of use for arts strategies, comments in the group and individual interviews reflected PD participants were incorporating the strategies they had learned into other subject areas and fully intended to continue to use the arts in their teaching.

Participant 4001 described changes in her classroom practice. She states, “I think it’s so interesting that even in math, ... now we use complimentary colors and they go and get the crayons. It's just addition and subtraction facts but I say, “Remember red? What’s the opposite?” It’s green. So they get their crayons. I mean, even when it’s something daily like with math, we're incorporating it with everything.” In an individual interview, Participant 1004 stated, “I think that we will try to be more creative in the future. I know I’m going to do more arts. That just kind of slipped away because it

wasn't in the teacher manual and you forget." An in the group interview the same participant stated, "I'm going to try to continue to integrate the arts as much as possible. It was awesome. Much more hands on. Much more creative."

The researcher believes that the inconsistencies between the quantitative survey results and participant comments for the secondary component, *frequency of use*, are due to time demands to plan for arts integrated activities. Even though participants expressed excitement about continuing to implement the strategies and seem well intentioned, they are also fully aware of the time constraints they face for planning and implementing strategies given the demands of the curriculum scope and sequence. Implementing arts integrated lessons an average of once a month may be the most participants envision being able to manage.

This study used an embedded mixed methods approach to examine how an online job embedded professional development program affected elementary teachers use of arts integrated approaches to learning. This chapter provided an analysis of seven sources of quantitative and qualitative data collected to inform the study's research questions. Chapter five provides a summary of the findings, practical implications, applications within the PISD, recommendations for future research and the study's conclusion.

CHAPTER V
RESEARCH OVERVIEW, SUMMARY OF FINDINGS, IMPLICATIONS,
RECOMMENDATIONS AND CONCLUSIONS

Research Overview

Using a mixed methods approach, this study examined how an online professional development program affected elementary teachers' use of arts integrated approaches to learning. The study also sought to explore teacher attitudes and issues that have a bearing on the use of arts approaches in teaching, as well as teacher learning that occurred as a result of engaging in an online professional development program.

A mixed methods approach was selected because previous research on online professional development programs had been criticized for incorporating only objective level assessments and anecdotal evidence to illustrate teacher learning (Dede et al., 2009; Solimeno et al., 2008). This study sought to expand the understanding of teacher learning by giving a voice to the professional development participants through their experiences transferring learning to practice. The qualitative data collected in this study was used to validate and corroborate the quantitative study.

The researcher chose an embedded mixed methods design that embedded a qualitative case study within a quantitative study (Creswell & Plano Clark, 2011). The purpose of the case study was to compare and corroborate quantitative findings and to bring greater insight to the research questions than would be obtained through quantitative methods alone (Creswell & Plano Clark, 2011). The qualitative and

quantitative data were collected concurrently but analyzed separately to preserve the integrity of each approach (Creswell & Plano Clark, 2011). The data sets were then combined for interpretation.

The study was conducted in PISD, a school district in South Texas that serves approximately 25,000 students PK through 12th grade. The student population in PISD is 93% Hispanic, 65% economically disadvantaged and 27% Limited English Proficient. Participants consisted of seven teachers (PD), employed at Public Elementary School #10 in the PISD, who participated in an eight week online professional development program and six teachers (SO), from the same campus, who volunteered to complete a survey only.

The central question, “how does an online job-embedded professional development program affect elementary teachers’ beliefs about and use of arts integrated approaches to learning,” guided this study. Additional study questions consisted of:

1. What attitudes and beliefs related to the use of arts approaches in teaching can be identified and interpreted from teachers’ responses on the Teaching With the Arts Survey (TWAS) (Oreck, 2004)?
2. What is the effect on teacher self-efficacy for teaching the arts after engaging in an online professional development program?
3. How are teachers’ knowledge and understanding of arts integration practices affected by using an online program?

Quantitative data consisted of demographic and survey responses to the Teaching With the Arts Survey (TWAS) (Oreck, 2001) and the Arts Knowledge Assessment.

Qualitative data consisted of (1) the TWAS (Oreck, 2001) instrument two open ended questions, (2) PD participants' written reflections, (3) a group interview, (4) two individual face to face interviews, and (5) an original lesson plan. The data collection process spanned ten weeks beginning in October of 2012 and ending in December of 2012.

In an embedded mixed methods design, three major steps are used in the data analysis process. The primary data analysis, the secondary data analysis, and then further mixed methods analysis to determine how the secondary data supported the primary (Creswell & Plano Clark, 2011).

Quantitative sources, the TWAS (Oreck, 2001) instrument and the Arts Knowledge Assessment, provided the primary data. Responses to the TWAS demographic and survey items were used in two separate analyses: (1) responses were compared using independent sample *t*-tests to identify whether significant differences existed between SO participants and PD participants demographic characteristics or beliefs and attitudes regarding arts instruction; and, (2) PD participants' pre and post TWAS (Oreck, 2001) survey responses were compared using dependent sample *t*-tests to assess changes in attitudes or beliefs or teaching practices following the online professional development program. In addition, the TWAS survey items were tested for internal validity using Cronbach's alpha. Analysis of the Arts Knowledge Assessment consisted of a comparison of PD participants' pre and post test scores using dependent sample *t*-tests.

The secondary qualitative data analysis of written and interview data used a system of pattern coding that searched for similarly coded passages and developed a statement to describe the interrelated data (Miles & Huberman, 1994; Saldana, 2009). The coding process was cyclical and evolved as the analysis progressed (Saldana, 2009) until three broad themes, *student outcomes*, *teacher self-efficacy*, and *external factors* emerged. Each theme was supported by three sub themes. Data analysis of the original lesson plan involved scoring each lesson plan based on The Arts Integration Lesson Plan rubric, an analytic scoring rubric that scored each of six criterion separately and then aggregated the scores together for an overall score (Reddy, 2010).

The following sections provide a summary of the study's findings, the study's practical implications, applications within the PISD, recommendations for future research, and a conclusion.

Summary of the Findings

This study explored how an online professional development program affected elementary teacher attitudes, knowledge, self-efficacy and use of arts approaches. Table 5.1 provides a summary of the overall findings for each research question and the central question that guided the study.

Findings were consistent with Oreck's (2004) research in that participants indicated they valued the arts in education and believed the arts to be beneficial to their students. Specifically, teachers stated the arts integrated lessons had positively affected their students' learning, engagement, confidence and self-esteem with improved student learning being referenced twice as many times as the other student outcomes.

Table 5.1

Summary Table of Overall Findings

Question	Findings
<p>1. What attitudes and beliefs related to the use of arts approaches in teaching can be identified and interpreted from teachers' responses on the Teaching With the Arts Survey (TWAS) (Oreck, 2004)?</p>	<ol style="list-style-type: none"> 1. PD participants placed a high value on arts instruction as a means to positively affect student engagement, student learning, and student affective factors. 2. PD participants felt supported by their current campus administration to use arts strategies. 3. PD participants were most concerned about the time required to plan arts activities rather than teach them. 4. PD participants indicated dance or movement activities were the most frequently used arts activities but the reported use was low indicating a frequency of rarely to once a month.
<p>2. What is the effect on teacher self-efficacy for teaching the arts after engaging in an online professional development program?</p>	<ol style="list-style-type: none"> 1. There was little to no effect on teacher self-efficacy for teaching the arts after engaging in an eight week online professional development program. 2. PD participants reported a 90% success rate in implementing arts integrated lessons. 3. PD participants indicated instructional videos made a significant impact on their successful use of the strategies.
<p>3. How are teachers' knowledge and understanding of arts integration practices affected as a result of using an online program?</p>	<ol style="list-style-type: none"> 1. PD participants' knowledge of arts integrated practices was positively affected after engaging in an online professional development program at a level beyond basic concepts and terms.
<p>Central Question: How does an online job-embedded professional development program affect elementary teachers' beliefs about and use of arts integrated approaches to learning</p>	<ol style="list-style-type: none"> 1. There was no significant change in PD participants' attitudes or beliefs about the importance of the arts, campus support for the arts, self-efficacy for the arts, barriers to arts instruction, or arts frequency of use after engaging in an online professional development program. 2. PD participants most often identified improved student learning as an outcome of using the arts in their classroom. 3. PD participants indicated campus support was a critical factor in teachers' use of arts strategies. 4. PD participants indicated a lack of time to plan and a lack of materials most significantly impacted their use of arts approaches.

Despite their strong belief in the arts, however, teachers consistently reported very limited use of the strategies in their classrooms both before and after the online professional development program between rarely and once a month. Three specific factors were mentioned as having an impact on teachers' use of arts approaches: (1) time to plan activities, (2) a lack of materials, (3) and campus and administrative support.

Because all of the arts lessons were integrated with core subject material, participants did not indicate time to teach the arts was a concern. This was despite the fact that teachers indicated they felt constrained by the demands of the curriculum. Rather, teachers repeatedly mentioned they had no time to engage in collaborative planning to create integrated arts lessons and activities.

This lack of time to plan is important also given the fact that teachers indicated a lack of lesson resources. Local resource documents provided through the PISD's district curriculum C-Scope include few, if any, related arts activities. One participant specifically mentioned the newly adopted textbook also failed to include any suggestions for related arts activities. This places the burden of lesson development solely on the classroom teacher and makes the lack of time to plan a critical factor.

In addition, teachers mentioned the lack of arts supplies was problematic. While participants in this study received all the art supplies necessary to implement the arts lessons in the professional development program, teachers commented this had been a barrier in the past. They indicated a concern this could still be a factor as they continued to try to implement the strategies in the future.

Another factor participants indicated made a significant impact on their use of arts approaches, was administrative and campus support. While participants felt supported by the current administration, it was clear they had not with previous administrations. In one case, a previous administrator had prohibited coloring. If teachers are to use arts approaches, they must feel they have the autonomy to do so.

Based on pre and post survey data, the online professional development program that was the focus of this study had little to no effect on elementary teachers' attitudes about or use of arts approaches to learning. There was also no indication that teachers' efficacy for arts instruction was impacted as a result of the online program. Despite the fact that participants reported a 90% success rate in implementation of the arts strategies, the researcher believes this success is primarily due to the use of video to support instruction rather than increases in actual skill.

The online professional development program did, however, make a significant impact on teachers' knowledge development. Significant gains in pre and post assessment scores and lesson plan data suggested that teacher learning was affected at a level beyond basic concepts and terms.

Practical Implications for Educational Leaders

Based on a review of the literature and the findings of this mixed methods study, the researcher identified the following practical implications for district and campus level leaders who wish to implement arts based approaches in their elementary classrooms: (1) educational leaders must provide teachers with adequate training, (2) educational leaders must provide teachers with adequate lesson resources and art

materials, and (3) educational leaders must cultivate a culture that supports risk taking and the use of innovative teaching styles.

Educational Leaders Must Provide Teachers with Adequate Training

Most teachers are unprepared to teach using arts integrated approaches (Garvis & Pendergast, 2010; Russell & Zembylas, 2007). Powell (2001) suggests this is due to teachers' limited arts background, knowledge, or experience. Previous research suggests that teachers' lack of self-efficacy for arts instruction impacted their ability to use arts approaches (Oreck, 2004). Data from this study also indicated that teachers were in need of additional training. Teaching in the arts requires facilitation skills that are specific to each art form (Oreck, 2004). Teachers must be provided the knowledge and skills to implement quality arts instruction through access to high quality professional development (Oreck, 2004).

Educational Leaders Must Provide Teachers with Adequate Lesson Resources and Art Materials

Data from this study indicated that time to plan arts lessons was the greatest factor impeding teachers' use of arts approaches. Further, teachers revealed that few, if any, arts related lesson materials were provided for them in their curricular resources or textbooks. In addition, teachers revealed that they lacked adequate supplies to implement arts instruction. This lack of lesson resources and materials prevented their use of arts approaches. Educational leaders must understand how teachers feel as they change their practices, what resources they will need, and when they will need them (Loucks-Horsley et al., 2003). If teachers are to implement arts based approaches,

district and campus leaders must ensure teachers have timely access to adequate resources.

Educational Leaders Must Cultivate a Culture that Supports Risk Taking and the Use of Innovative Teaching Styles

Effective teaching in the arts shares the basic features of other student-centered inquiry based approaches where the teacher acts more a facilitator of learning, works with groups of students at different speeds and on different topics, and encourages student problem solving (Oreck, 2004). This style of teaching stands in stark contrast to the narrowly prescribed curricula derived from an educational system driven by testing and accountability standards. If schools are to meet the needs of diverse groups of students, new and innovative methods of teaching are required.

Research suggests, however, that the more a model of teaching varies from the customary teaching style, the more uncomfortable teachers will be using it (Joyce et al., 2009). Using creative teaching methods requires the teacher to incur considerable risk (Guskey, 2002). Teachers experimenting with creative teaching methods, such as arts integration, need to perceive that administrators support these practices in order to develop a strong sense of efficacy. Data from participants in this study suggested that the support of administration plays a critical role in the use of arts integrated approaches. In some cases, the lack of support of campus administration stopped the use of arts approaches altogether. Campus administrators must develop a culture that supports risk taking and the use of innovative practices if teachers are to feel comfortable engaging in arts approaches.

Recommendations for PISD

The purpose of this study was to explore the use of a web based approach as part of a job-embedded model of professional development and to provide formative and summative data for the PISD to evaluate and improve the overall professional development program. This study specifically explored the use of online modules as a medium for arts based professional learning within a job-embedded approach. Based on the data, the researcher recommends that PISD: (1) persist and expand the development of online content, (2) expand arts professional development opportunities for teachers, and (3) supplement online professional development with peer coaching.

Persist and Expand the Development of Online Content

One of the purposes of this study was to examine the effectiveness of an online model of professional development within a job embedded approach for the PISD. Data illustrated that the online model was successful in producing teacher learning. Not only did teachers test scores improve an average of 24 points but teachers were able to successfully demonstrate their knowledge of the processes by developing original lesson plans.

Based on this data, PISD educational leaders should persist in their development of online content for teachers that is available when and where teachers have opportunity to engage in professional learning. The platform for the online content should be easy to access and provided in short segments that could be viewed within the teachers' regular planning period. One of the complaints of participants in this study was the difficulty in accessing the course platform, Project Share. The researcher recommends the PISD

pursue other platforms for offering online professional development content, such as I-Tunes U, that are easy to navigate and do not require separate log ins or groups.

Offer Expanded Arts Professional Development Opportunities

The scope of this study was limited as only seven participants from one elementary campus took part in the online professional development program. Data illustrated, however, that the need for professional development in the arts was great. Scores on the Arts Knowledge Assessment revealed the majority of teachers had little to no practical knowledge of visual art or drama content prior to engaging in the professional development program. Since the PISD does not currently employ visual arts or drama teachers at the elementary level, it is the elementary classroom teachers' responsibility to deliver the state required curriculum in these disciplines. Further, as an IB district, all PISD elementary teachers need to be able to successfully integrate arts content within their units of inquiry. This requires an understanding of the content of both the arts and non-arts disciplines. The researcher recommends the PISD expand opportunities for all elementary teachers to engage in online professional development in the arts.

Supplement Online Professional Development with Peer Coaching

Despite data that suggests teachers were able to learn arts content via the online format, there was no evidence to support teachers' use of arts approaches increased as the result of learning. Joyce and Showers (2002) contend that in order for teachers to transfer increased knowledge into a change in classroom practice, the professional development process must include the element of coaching. Coaching dramatically

increases the transfer of training into instructional practice (Joyce & Showers, 2002).

The researcher suggests that the PISD support elementary teacher learning through the use of secondary arts specialists and previously trained elementary arts specialists, acting as peer coaches, to facilitate changes in teacher practice.

Implications for Future Research

This study explored how an online professional development program affected teacher attitudes about and use of arts approaches in the classroom. There are many areas in which the findings of this study might be enhanced through future research. Four suggested topics for related research include: (1) investigating how a more sustained program of online professional learning in the arts might affect teacher self-efficacy and transfer to classroom practice, (2) examining a model of online professional learning in music and the influence a substantial arts background in music has on teacher use, (3) assessing student achievement and classroom engagement when using arts approaches, and (4) exploring the impact of instructional videos on teacher self-efficacy for the arts.

This study was limited due to the short time span of the professional development program. A significant body of research supports that successful professional development must be sustained and that changes in teacher practice take time and persistence while the learner adds, modifies, refines, and restructures prior understandings (Joyce & Showers, 2002; Loucks-Horseley et al., 2003; Rasmussen, 2008). Results of this study suggested that while participants were able to learn through the online format, there was little impact on classroom implementation or efficacy.

Additional studies might investigate whether a more sustained online professional development program that occurs over an entire school year or consecutive years would have a greater impact on teacher efficacy and use of arts approaches.

Due to the limited time span of the study, this professional development program targeted instruction in only visual arts and drama. Participants' responses to the TWAS (Oreck, 2001) demographic items indicated six of the seven PD participants had previous experiences in music, some with more than 15 years of training, while only three reported previous training in the visual arts. None of the teachers reported prior experience in theater/drama. While Oreck (2004) found that prior arts experiences were not a significant predictor of current arts use, more than 53% of his study participants indicated prior experiences of a year or less. Additional research on the effect of online professional development in music and the influence of a substantial arts background in music on teacher self-efficacy and use of this specific art form in the classroom are needed.

Both quantitative and qualitative data in this study and previous research (Oreck, 2004) indicated teachers' strongly believe the arts are important in education. PD participants in this study identified student learning, engagement, and self-esteem were positively impacted as a result of using the arts approaches in the classroom, however, no attempt was made to validate or measure the degree of impact online professional learning had on students. Further research that analyzes the complete cycle of the online professional development process by examining the impact on student achievement is warranted.

One unexpected outcome of this study worthy of further investigation was the impact of the instructional videos on teacher efficacy for arts instruction. The instructional videos were recordings of teacher artists instructing teachers in artistic processes and mediums. While the videos were intended for PD participants to view and practice outside of the classroom, PD participants reported using the videos as support within the classroom as well. Ultimately, the instructional videos seemed to have a significant impact on teacher efficacy.

The following excerpt is particularly compelling as it illustrates how the video addressed the teacher's need to feel confident in being able to answer a student's question. Participant 5001 states, "Not only are the lessons prepared but you've also got the videos there. If I didn't know what constructivism is, I can click on the video again. And if I didn't get it, I can click on it again. I mean, it's at my own pace so I like that. And then, *if a child has a question, I feel like I can answer it. I can show them.*"

Previous research suggests that a lack of teacher self-efficacy is the single greatest barrier to the use of arts approaches in the classroom (Oreck, 2004). A more complete understanding of the impact of video instructional support on teacher self-efficacy and use of arts approaches could impact the design of online arts professional development in the future.

Conclusions

"Professional development programs are systemic efforts to bring about change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students" (Guskey, 2002, p. 381). This record of study set out to examine

how an online professional development program affected elementary teachers' use of arts integrated approaches to learning, explore teacher attitudes and issues that have a bearing on the use of arts approaches, and examine teacher learning that occurred as a result of engaging in an online professional development program. Findings revealed that elementary teachers' use of arts approaches in the classroom is multifaceted and complex. Three conclusions can be drawn from the data of this mixed methods study: (1) online formats are a viable approach for arts professional development, (2) a lack of time to plan most significantly impacts the use of arts approaches, and (3) access to lesson resources may increase the use of arts approaches.

Online Formats are a Viable Approach for Arts Professional Development

Previous research revealed that teachers expressed the need for professional development to improve their knowledge and expertise in artistic techniques (Oreck, 2004). This study explored whether an online model of professional development would affect teacher knowledge and understanding of arts integrated approaches to learning.

While there are a number of studies in the literature that examine the effect of online learning with students, few studies have examined the effectiveness of online platforms for professional development. Further, few studies cite evidence of online platforms producing deep conceptual learning or changes in teacher practice (Dede et al., 2009). In this study, data suggests that an online professional development program was able to increase teachers' knowledge of arts content and processes. In addition to significant increases in pre and post test data, teachers were able to successfully

demonstrate their understanding of arts instructional practices by creating an original arts integrated lesson plan. This combination of qualitative and quantitative data suggests teacher learning progressed beyond the level of basic concepts and terms. Based on this data, the researcher contends that the use of an online model of professional development is a viable option for arts professional development.

A Lack of Time to Plan Most Significantly Impacts the Use of Arts Approaches

Building on the research of Oreck (2004), this study explored the attitudes and institutional issues that have a bearing on teacher use of arts approaches to learning. A strong relationship exists between “teachers' educational beliefs and their planning, instructional decisions, and classroom practice” (Pajares, 1992, p. 326). Oreck (2004) found that teachers, even those with little to no arts background, place a high value on the arts in education and believe the arts are beneficial for students. Despite this and despite the availability of professional development in the arts, teachers reported rarely using arts approaches in the classroom. Oreck (2004) identified a variety of institutional constraints, such as a lack of time, space, materials, and demands of the curriculum impeded teachers' use of arts approaches.

Data from this mixed methods study supports and confirms Oreck's (2004) findings. Teachers indicated a strong belief in the value of the arts and its positive impact on students. As they facilitated the arts based lessons, they reported observing improvements in student learning, student engagement, and in student self-esteem. Despite this strong support for the arts and consistent with the prior research (Oreck, 2004) however, teachers reported limited use of arts approaches both before and after the

online program, between rarely and once a month. The institutional factors that impacted their use of arts approaches also mirrored Oreck's findings. Teachers identified their level of knowledge, administrative support, and the availability of art materials as critical to arts implementation.

The greatest barrier to teachers' use of arts approaches, Oreck contends however, was a lack of knowledge and self-efficacy for arts instruction. In contrast, the most consistently voiced concern in this study was a lack of time to plan. Teachers indicated that having ample opportunities to plan collaboratively with their grade level, rather than additional professional development, would motivate them to use arts approaches more often.

Based on his findings, Oreck (2004) suggested that the use of arts approaches could be influenced by providing ongoing support for teachers to develop their own creativity and artistry, helping teachers develop skill in gathering empirical evidence on the effects of arts on students, and by increasing teacher training by making arts workshops a higher priority. While the researcher agrees that additional professional development for teachers could positively impact the use of arts approaches, data from this study suggests that time to plan arts lessons and activities was a greater barrier to implementation.

Access to Lesson Resources May Increase the Use of Arts Approaches

Oreck (2004) found that the single greatest barrier to the use of the arts in education is lack of teacher knowledge and self-efficacy. Findings in this study, while supporting the need for teachers to engage in arts professional development, suggest that

a lack of time to plan arts activities and lessons may more significantly impact the use of arts approaches than additional training. The researcher contends that Oreck's (2004) findings and this study's findings are related. Teachers' lack of arts knowledge does not give them the confidence they can plan and successfully implement rigorous arts lessons. Even when teachers feel they have the ability to plan arts lessons, however, they do not have time to do so.

Simply increasing teacher knowledge and self-efficacy may not have the desired effect of increasing the use of arts approaches if teachers are unable to find time to create lesson content. If teachers are to increase their use of arts approaches, they either need the time to create their own integrated lessons or the lessons and resources have to be provided for them. By providing teachers access to content rich, engaging arts integrated lessons, a teachers' lack of knowledge or self-efficacy appeared to diminish. Data from this study revealed that when teachers were given the lesson content and instructional support, they were able to successfully implement the arts content 90% of the time, despite the finding that their self-efficacy did not improve.

Flammang (2010) found that providing teachers with materials that were readily available, easy to use, and adaptable for a variety of situations and learners increased teachers desire to use them more often. Since it is unlikely that additional time to plan is a viable option within the confines of the school day, the most logical conclusion is that content aligned arts lessons need to be included as part of teachers' day to day scope and sequence or textbook resources. While it is ultimately the teacher's choice to

integrate the arts, providing ample lesson resources may enable more frequent use of arts approaches in the classroom.

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APPENDIX A

TWAS (ORECK, 2001) SAMPLE QUESTIONS

Question #	Question	Answer choice scale				
	Primary Component 1 How important do you feel it is for your students to:	Not important → Very important				
2.	Listen to a piece of music	1	2	3	4	5
6.	Read or attend a play	1	2	3	4	5
8.	Engage in visual arts activities	1	2	3	4	5
	Primary Component 3 To what extent do you agree with the following statements:	Strongly disagree → Strongly agree				
17.	I feel confident in my ability to facilitate dance activities.	1	2	3	4	5
24.	I feel confident in my ability to facilitate visual arts activities.	1	2	3	4	5
	Primary Component 3 To what extent do you agree with the following statements:	Strongly disagree → Strongly agree				
22.	My supervisor encourages creativity.	1	2	3	4	5
27.	In general, my school is supportive of innovative teaching approaches.	1	2	3	4	5
	Primary Component 4 To what extent do you agree with the following statements:	Strongly disagree → Strongly agree				
18.	I feel that I don't have enough time to teach the arts along with the rest of the curriculum.	1	2	3	4	5
23.	I don't have enough space to use movement effectively in the classroom.	1	2	3	4	5
	Secondary component How frequently do you:	Never → Daily				
9.	Lead a movement activity with your students?	1	2	3	4	5
13.	Actively listen to a piece of music?	1	2	3	4	5
15.	Study works of art with your students	1	2	3	4	5

APPENDIX B

TEACHER REFLECTION SAMPLE QUESTIONS

1. What did your students learn about visual art or drama in this lesson?
2. How did the arts experience help your students understand or connect to the foundational content standards?
3. What worked and what did not work in this lesson? How would you change/improve/add to it?
4. How did this lesson help in differentiating for your students?

APPENDIX C

Focus Group Interview Protocol

Time of Interview: 4:00 p.m.

Date: October 22, 2012

Place: Library of Public Elementary School #10

Interviewer: Karen Herrera

1. How has your experience been with the online modules so far? What challenges have you faced so far?
2. On which of the activities do you feel you have been most successful, and why?
3. Which activity has been the most challenging, and why?
4. What have you learned about the arts?
5. How have you applied your learning into the classroom?
7. How could the professional development model be improved to increase your opportunity to learn?
8. What additional support do you need?

APPENDIX D

Individual Interview Protocol
Place: Public Elementary School #10
Interviewer: Karen Herrera

1. To what degree do you feel this program will affect your use of arts integrated instruction?
2. How do you think your arts background affects your ability to use the arts in teaching?
3. What affect has the online PD program had on your teaching?
4. Do you feel more confident learning an arts integrated activity in visual art? Drama? Why?
5. How did the online experience compare with face to face PD you have attended?
6. What was your biggest challenge with the program?
7. What was your greatest success with the program?
8. If the program had been longer do you feel you would have liked to continue trying new methods?
9. Do you feel other teachers could learn from the strategies you learned?

APPENDIX E

Arts Integration Lesson Plan Rubric

Teacher #	Novice 1	Developing 2	Accomplished 3	Exemplary 4	Score
Integration	Includes at least two subjects. Content is not connected.	Includes a combination of at least two subjects. There are weak connections between subjects. Emphasis on one subject only.	Includes a combination of at least two subjects connected through a central theme or topic. There are limited connections between subjects. One subject takes precedence over the other.	Includes a combination of at least two subjects connected through a central theme or topic. There are strong connections between subjects. Both subjects are equally valued.	
Instructional Goals and Objectives	Instructional goals and objectives are not stated. Learners can not determine what they should know and be able to do as a result fo learning and instruction. There is no connection of subject material.	Instructional goals and objectives are stated but are unclear. Learners are given minimal information about what they should know and be able to do as a result fo learning and instruction.	Instructional goals and objectives are stated for some disciplines. Learners can determine what they should know and be able to do as a result of learning and instruction in some subjects.	Instructional goals and objectives are stated for all disciplines. Learners can determine what they should know and be able to do as a result of learning and instruction in all disciplines.	
Instructional Activities/Strategies	Activities are inconsistent with learning goals. No perceivable sequence.	Activities are inconsistent with learning goals. Some steps are sequenced but major steps are omitted or out of order.	Activities are consistent with learning goals in one discipline. Major steps are sequenced.	Activities are consistent with learning goals in all disciplines. Major steps are sequenced.	
Assessment	No assessment effort is included in either discipline.	Includes a separate standard assessment strategy for both disciplines. Assessment is minimally tied to instruction.	Includes a criterion based assessment in at least one discipline. Assessment is tied to student learning. Both disciplines are assessed.	Includes a single integrated criterion based assessment to assess student learning in two subjects. Assessment is clearly tied to student learning.	
Arts Application	Art content is not included or accurately applied.	Includes arts content or a medium from the module but application is not original.	Presents an original use of an art medium or content from the module but application does not effectively connect to another discipline or enhance learning.	Presents an effective and original use of an art medium or concept from the modules to enhance learning in another discipline.	
Resources/Materials	A list of resources and materials is not included.	The list of resources and materials is incomplete and inappropriate for the activities and art medium. Major items are missing.	The list of resources and materials is incomplete but appropriate for the activities and art medium. Some items are missing.	The list of resources and materials is comprehensive, complete and appropriate for the activities and art medium.	
				Total Score	

APPENDIX F

ONLINE COURSE MODULE SCREEN SHOT



Search for: In [Forums](#)

[Switch to Course](#) | [Exit Course](#) | [Log Out](#)

Course <http://www.epsilon.com/crs/12154558>
 Welcome KAREN HERRERA to Teaching with the Arts
 ## Add your favorite tools by dragging the links from left navigation ##

Home - Course

Syllabus

Lessons

Add Lesson

Calendar

Resources

Drop Boxes

Announcements

Course Mail

Members

Online Classroom

Workgroups

Take Notes

Forums

Chat

Blogs

Wiki

Grade Book

Tests/Quizzes

Instructor Reports

Adaptive Release

Help FAQ

Alert

Show/Hide Tools

Options

Custom Tools

Instructor View

Disable Menu Tips

Course Lessons

Use this tool to create lessons for your students.
Note: Click and drag a row up or down to change the display order.

This course has expired. The Lessons may not be modified.

Title	Design Method	Start Date	Action
Module 10 - Mathematics and Art - Still Life Drawing This lesson includes the creation of a still life to illustrate a mathematics number sentence.	Self-Designed	11/10/2012	
Module 11 - Drama and Vocabulary Development This weeks lesson focuses on strategies to teach vocabulary.	Self-Designed	11/27/2012	
Module 8 - Social Studies, Language and Visual Arts- Landscapes and Poetry (2nd grade) (Hidden Lesson) This lesson combines visual art and poetry to explore the similarities and differences of various communities.	Self-Designed	10/28/2012	
Module 5 (1st Grade) - Reading, Science, and the Arts - Line, Color and Sound (Hidden Lesson) This lesson explores the concepts of sound, color, and line through the conceptualization of a story about making music.	Self-Designed	10/21/2012	
Module 4- Science and the Arts - Force, Motion, Art, and Drama Grds 1,2, and 5 (Hidden Lesson) This lesson combines Science, Art, and Drama to explore the concept of Force and Motion through the abstract art of Jackson Pollack.	Self-Designed	10/14/2012	
Module 3 - Math and Drama - Time (2nd Grade) (Hidden Lesson) This module uses drama based instruction (DBI) to enhance student understanding of reading analog and digital clocks. Students will use the strategy ...	Self-Designed	10/08/2012	
Module 1 - Introduction to Arts Integration (Hidden Lesson) This module introduces the concept of arts integration and how it might be used in the classroom to enhance learning.	Self-Designed	10/01/2012	
Module 7- Social Studies, Language and Visual Arts - Portraits and Poetry (Grades 1 and 5) This module incorporates research on individuals that have shaped our community or country to create an original portrait and acrostic poem.	Self-Designed	10/28/2012	
Module 3 - Math and the Arts SHAPE and COLOR (Hidden Lesson) This module explores geometric shapes through the use of warm and cool colors to create 3-D art.	Self-Designed	10/15/2012	
Module 2 - Math and Visual Art Patterns and Sequencing (1st and 5th grade) (Hidden Lesson) This module uses beading to assess students knowledge of pattern, sequence and color theory.	Self-Designed	10/08/2012	
Module 6 - Language Arts and Drama (5th grade) (Hidden Lesson) This module explores drawing and the use of space to produce original drawings during science lab through direct observation.	Self-Designed	10/21/2012	
Module 9 Reading Comprehension - Language and Visual Arts (1st and 5th grade) This module encourages reading comprehension through the creation of watercolor landscape paintings depicting scenes from the reading.	Self-Designed	11/03/2012	
Module 7 Science and the Arts - Stages of Water (Hidden Lesson) This module explores the water cycle or water stages through the creation of a outdoor landscape and drama based instructional strategies.	Self-Designed	11/12/2012	
Module 8 - Arts Integrated Lesson Creation and Implementation (Hidden Lesson) This module focuses on the assimilation of arts content to create and implement an original lesson plan.	Self-Designed	11/26/2012	

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APPENDIX G

ARTS KNOWLEDGE ASSESSMENT Pre and Post Sample Questions

1. Which of the following are considered Elements of Art? (Select all that apply)
 - A. Color
 - B. Texture
 - C. Shape
 - D. Perspective
 - E. All of the above

2. Lines that outline objects are called:
 - A. Border Lines
 - B. Contour Lines
 - C. Outlines
 - D. Curved Lines

3. Drama based instruction:
 - A. Is difficult to do in a classroom because of limited space
 - B. Requires rehearsals and a performance
 - C. Is a cross curricular learning strategy
 - D. Should be taught by a drama teacher

4. Which of the following is not an example of form?
 - A. Square
 - B. Sphere
 - C. Cone
 - D. Cube

5. The farther away an object is:
 - A. The smaller it appears

- B. The less intense its colors become
 - C. The less detail can be seen
 - D. All of the above
6. Which of the following are characteristics of drama? (Select all that apply)
- A. Usually takes place in a classroom rather than a stage
 - B. Dialogue and action are improvised rather than scripted
 - C. Usually culminates in a performance
 - D. Student centered rather than audience centered
 - E. Props are used to stimulate the imagination of the players rather than to create an illusion for the audience.
7. Which of the following media is considered to be transparent?
- A. Tempera paint
 - B. Watercolor
 - C. Acrylic paint
 - D. Oil paint
8. An example of mixing a secondary color would be mixing:
- A. Yellow and green
 - B. Yellow and purple
 - C. Orange and green
 - D. Yellow and red

APPENDIX H

SAMPLE LESSON PLAN

Teaching with the Arts

1001

Karen Herrera

Arts Integrated Lesson Plan

Grade Level: 1 st Grade	
Title: Piggy Bank	
Theme or Topic: How much money can you put inside your piggy bank?	
Objective: The Learner will identify individual coins and value. The learner will create a still life of a piggy bank, do a rubbing of coins above the piggy bank, and write names of coins that will go into the piggy bank.	
Subject 1: Mathematics	Subject 2: Visual Art
Cscope Unit: 8	Still Life, Crayons
Subject 3:	Subject 4:
Subject 1 Content Standards: 1 st – Identify individual coins by names and values Use real money , or play money so they can see details of individual coins. Have students count money, starting with larger value coins, to less value coin	
Subject 2. Still Life Content Standards: Perception. The student develops and organizes ideas from the environment. Creative Expression: The student expresses ideas through original artworks, using a variety of media with appropriate skill. The student is expected to invent images that combine a variety of colors, forms, and lines use a variety of materials to produce drawing, rubbing, prints, and constructions.	
Subject 3 Content Standards: N/A	
Subject 4 Content Standards N/A	
Materials:	8 ½ x 11 White Drawing paper Crayons, Pencils, Erasers, Piggy Bank, Play Money, Real Coins,
Resources:	Coins
Instructional Activities:	Using the IPAD, show the students coins. There is an app, Piggy Bank App , where students can manipulate coins to test their knowledge of coins. Students can even take pictures of sets of coins and state the amount of coins they have on their IPAD. Are all the coins facing up (heads) or down (tails)? Can you see the details of the face, eagle, building, etc.?
Formative Assessment #1	Place a piggy bank in the middle of the room so all students can view the piggy bank. Have students do a pencil sketch of the piggy bank on their drawing paper. What do you notice about the piggy bank? Have students add details and color to their piggy bank. If there is any shadows, add shading to the areas where the light doesn't hit, and highlights where the light does hit the piggy bank. Have students select three to five coins that they can identify the value and names. Have they place on the top of the piggy bank , under the paper, and carefully rub a

Summative Assessment:	Have students help you create a rubric.
	crayon on the flat side rub in one direction to get the best rubbing of the coin. After the rubbing, have students write the names of the coins and their values.
Formative Assessment #2	

	Novice 1	Advancing 2	Mastery 3
Correctly identifies coin by names and values			
Still life of piggy bank accurately demonstrates individual characteristics of the piggy bank			
Appropriately uses and cares for materials			
Uses space appropriately			

APPENDIX I

RESPONSES TO TWAS (ORECK, 2001)
OPEN ENDED QUESTION #1

Teacher #	TWAS Open Ended Question #1: What do you feel is the strongest current motivation for you to use the arts in your teaching?
1001 PRE	I feel I need to have the students do more hands-on engaging activities and arts activities have helped my students in the past.
1001 PST	The arts help students be engaged in activities from various content area. Students can express themselves regardless of their language and it also helps them build self-esteem.
1002 PRE	Students will benefit by having engaging art activities
1002 PST	The students get very engaged and they really enjoy art work. I strongly agree that you can teach through art.
1004 PRE	I enjoy using art in my classroom because it encourages students to think. It also promotes eye hand coordination. It is fun for everyone.
1004 PST	I was very pleased with the results we got from the activities. I am looking forward to their reaction to The Dot when we read it.
1005 PRE	I feel that students seem motivated when art is incorporated in any area.
1005 PST	Student motivation to learn. My students seemed more involved in the lessons when the arts are integrated.
1006 PRE	I grew up with the arts. I know how much they can enrich our lives. Give me ideas, I will try anything!
1006 PST	It is so great for the students. It broadens their world, ideas, and thinking.
4001 PRE	The opportunity to extend a lesson and allow students to explore with different resources and activities reaching all the different intelligences and capabilities in the classroom.
5001 PRE	I firmly believe that if students can visualize what they are learning then they comprehend much better.
5001 PST	I am a strong believer that students need to be more creative to retain information better. If they can visualize the concept, then they can learn it. Hands on always works well.
SO	Different Approach
SO	Student learning styles. Not all students learn in the same way.
SO	No answer
SO	My students need to feel motivated to learn. Little kids like feeling like they are playing when they are really learning and working.
SO	Students react to music very well. It has many positive effects on their learning. Using music as a mnemonic device is also a plus.
SO	Exposure

APPENDIX J

RESPONSES TO TWAS (ORECK, 2001)
OPEN ENDED QUESTION #2

Teacher #	TWAS Open Ended Question #2: What do you feel would motivate you to use the arts more often than you already do?
1001 PRE	If I had more planning time with my grade level, I feel that we could plan awesome art activities to help engage our students in science and social studies, even in reading and math.
1001 PST	If I could have more time, uninterrupted time to plan for all of my subject areas with my colleagues. We could bounce ideas and activities with one another for all our content areas.
1002 PRE	Time to plan and share art activities will be great for our students. Together with my grade level can give us easy and enjoyable activities so our kids can also have fun.
1002 PST	Time is really an issue, but I think we can modify to do short activities, but that means you have to search for these activities.
1004 PRE	Materials get really expensive. I need help integrating art with other subjects.
1004 PST	It is another interesting way to check for understanding. It is very hands on and more creative. The students really enjoyed the activities.
1005 PRE	Being more knowledgeable in the area of arts.
1005 PST	The opportunity to have participated in this integrated arts course has given me motivation and guidance in continuing to incorporate the arts in my teaching.
1006 PRE	I don't often take the time to use the arts in my curriculum. ... Also we have ZERO planning time. We are bombarded with work and have little time to come up with our own lessons involving arts. When I think of something appropriate - acting out the seasons by raking, building a snowman, swimming - we do it, but I often am not in touch with what the possibilities are.
1006 PST	If I think of something that could benefit kids, I will incorporate it. The more I use it, the more I will think of it. The more success a teacher has the more they think of it and try things that are great for kids.
4001 PRE	Materials and resources available in the classroom
5001 PRE	I use drawing in math and science constantly but I would like for my students to see how the arts would make learning fun and also make them more creative.
5001 PST	I have the support of my supervisor and principal, so for me, using art in the classroom is not a problem. I enjoy it and so do my students.
SO	Extended time ...
SO	and support from administrative staff
SO	Integrated with the curriculum
SO	Better supplies
SO	more time
SO	and a bigger space
SO	Inservice training workshops
SO	having more materials to create art

SO	and ideas to integrate curriculum with the arts
SO	Not being constrained by the demands of the curriculum