

Teacher Change and Principal Leadership: Keys to Sustaining the Arts

Arts Impact/Arts Leadership - A U.S. Department of Education 2006-10 AEMDD Grant

INTRODUCTION

Need for Project

Increasing quality standards-based arts education for all students is the primary mission of two leading arts education organizations in Washington State—the Arts Education Department of Puget Sound Educational Service District (PSESD) and ArtsEd Washington (AEW). Two of the greatest needs to establish and sustain quality arts education in the schools are teacher training and principal training. These two organizations put into practice experienced and proven professional learning models based on research and best practice in the area of arts and education—PSESD’s *Arts Impact (AI)* and AEW’s *Principal Arts Leadership (PAL)*.

Each of these programs provides significant and measurable benefits and support for schools hoping to include arts education into the core curriculum. It is the premise of the project presented here that both teacher and principal professional development are necessary for the arts to sustain as a basic component of education. Training principals to intentionally plan and support the arts as the instructional leader is critical. A second key component of a successful arts plan is teacher training. Teachers’ skills, knowledge, and pedagogy in the arts must be developed, just as in other core classroom disciplines, in order to integrate the arts into school culture. Trained teachers are much more likely to sustain arts-infused learning in their classrooms when supported by a principal who is passionate, knowledgeable, and able to provide systems and supports for arts education in the same way as other content.

Project Collaboration and Brief Description

Arts Impact/Arts Leadership (AI/AL) is a joint project of Puget Sound Educational Service District’s (PSESD) *Arts Impact* program and the Washington (State) Alliance for Arts Education’s (ArtsEd Washington) *Principal Arts Leadership* program. The project investigated teacher, student, and school level outcomes as impacted by arts-infused teaching and learning, intense and sustained professional development in arts-infused learning, and principal leadership training. Together *AI* and *PAL* worked to increase standards based arts education for students and research practices that will sustain arts integration in elementary schools.

The title of this grant project is *Arts Impact/Arts Leadership*. The title references two training models—PSESD’s *Arts Impact (AI)* program that focuses on teacher development in arts-infused teaching and ArtsEd Washington’s ***Principal Arts Leadership (PAL)*** program that focuses on principal development in supporting and sustaining arts education. Ongoing references to *PAL* represents the “Arts Leadership” component of the research.

History of Arts Impact and Principal Arts Leadership

AI and *PAL* existed prior to the start of the grant, continued to operate independently in other schools during the grant, and are both currently operating independently. The programs learned valuable information from the grant project that has contributed greatly to the growth and improved the work of both organizations. The relationship between the two organizations and their complementary programs was and continues to be collaborative. As ongoing practice, *PAL* and *AI* maintain a symbiotic relationship

in which each program endorses the other to principals participating in their respective programs as a key component to sustaining the arts in their schools.

Arts Impact (AI) began in 1999 and is a successful two-year teacher training model that incorporates Artist-Mentors to develop classroom generalists to teach standards based arts-infused lessons in the arts and other core content areas. Arts-infusion is defined by *Arts Impact* as authentically shared concepts between two disciplines, for example: symmetry in math and visual art, pattern in dance and math, story sequence in theater and writing. The goal of *AI* training is for teachers to develop autonomy to implement arts-infused lessons and include the arts as a key educational component of their teaching during training and into the future.

The *Principals' Arts Leadership (PAL)* program was created by ArtsEd Washington in 2004 to inform and support elementary school teams, led by principals, in the development and implementation of school arts plans to increase arts education. Each school's plan was intended to build on and reflect the unique pathway appropriate to that school's characteristics and community, using existing and new resources.

PROJECT DESIGN AND IMPLEMENTATION

Arts Impact/Arts Leadership was a quasi-experimental design with three comparison groups composed of principals, teachers and students in third, fourth and fifth grades. Group A teachers and schools received the *Arts Impact* two-year professional development program and *Principal Arts Leadership* training. Group B teachers and schools received only *AI*. Group C was the control group. There were three schools in each group.

Principal Arts Leadership

Project Year One: 2006-07

The first *PAL* year of the project was a planning and capacity building year. Participating schools were selected and randomly assigned to their treatment group, evaluation tools were finalized, curriculum was developed and baseline data was gathered.

Project Year Two: 2007-08

The second *PAL* project year was an implementation year. In July 2007, all nine of the participating schools, both treatment and control, participated in School Arts Inventory baselines and principal interviews. As school resumed in September, the three *PAL* treatment schools received visits to review the project expectations and assist them in developing individual School Arts Teams. In January 2008, principals and teams from these three treatment schools joined other *PAL* schools¹ for a Whole Team Planning Workshop, hearing from a panel of *PAL* alumni principals, and beginning goal setting on their individual School Arts Plans, using their own arts baselines. Returning to their schools, site-based activity continued this momentum with a follow-up coaching visit from *PAL* training staff in early spring that supported development of an initial School Arts Plan by the end of the school year.

Project Year Three: 2008-09

The second *PAL* implementation year began with a *PAL* peer group workshop in October 2008 to which principals were encouraged to bring their Arts Team lead. Focusing on steps for implementation of the

¹ The Arts Leadership treatment schools included in this project were also part of a cohort of eight elementary schools participating in *PAL* from 2007 through 2010. Arts Leadership treatment schools received services identical to those received by the general *PAL* cohort.

Arts Plans through their instructional leadership, principals at the *PAL* schools were supported in making connections between research and experience with the keynote presentation on “Nine Characteristics of High Performing Schools” by Dr. Sue Shannon, Washington State Office of the Superintendent of Public Instruction. This year included two site visits from *PAL* staff, and access to additional consulting support and workshops. Seed money, a pillar of the program, was also available to the schools to begin implementation of plan components. ArtsEd Washington carried out a comprehensive *PAL* program evaluation; although the treatment schools were not specific participants in this research, it informed the changes implemented later in the program. The evaluation process resulted in a final report, *Anchoring Arts Education.*²

Project Year Four: 2009-10

The final *PAL* year, sustainability, had a similar structure and components as project year three, with the Fall 2009 peer workshop focusing on the best practices from *PAL* schools emphasizing opportunities for principals to learn from the emerging peer network. At that time, ArtsEd Washington also began implementation of a number of changes recommended in the program’s 2009 evaluation report, and added the Principals Peer Forum, which was conducted in March 2010 and supported in part by the Association of Washington School Principals. This Forum dug deeper into the report’s findings via *Conversation Cafés* to build the peer connections and share best practices among principals. This year also saw the development and piloting of a suite of new planning tools³ — based on The Institute of Cultural Affairs’ Technology of Participation™ methods. These tools were piloted in the three Group A schools in May 2010, ensuring that these schools left the formal program with an ongoing team-developed School Arts Plan.

Arts Impact

The *Arts Impact* professional development model as implemented in the *AI/AL* project was a modification and expansion of the *Arts Impact* Summer School model, developed for a 2002-2005 AEMDD grant. Four modifications were made to the Summer School model: change to an in-school model; more focused curricula; grade level implementation; and change in intensity of instruction. The *AI* lessons were focused on specific concepts within one strand of the Washington State math and writing standards with the goal of better identifying the impact of the intervention on student learning.

In the Summer School, stand-alone arts-infused concepts had been selected from a variety of math strands (number sense, geometry, proportional reasoning). *AI* math lessons focused on specific geometric sense concepts infused into the curriculum with shared concepts in dance and visual art.

The Summer School model had focused on stand-alone arts-infused concepts in both reading and writing. *AI* project theater lessons focused on standards-based concepts within the narrative writing strand mapped into the curriculum.

The Summer School model served second, third and fourth grades while *AI* was focused on third, fourth and fifth grades, the grades that match state level testing in math and writing. In terms of intensity, Summer School provided 60 hours of instruction per grade level and incorporated a broad range of

² *Anchoring Arts Education: Principals’ Arts Leadership* An evaluation of ArtsEd Washington’s Principal’s Arts Leadership Program for elementary schools, May 2009.

http://artsedwashington.org/download/Anchoring_Arts_Education_PAL_full_report.pdf

³ “The action planning tools for The Institute of Cultural Affairs Technology of Participation include: clarify directions, align resources, designate leadership roles and responsibilities, and build team trust and support.”

concepts in math and literacy. The goal for *AI* was 45 hours of instruction but with a narrower curriculum focus—geometric sense and narrative writing.

Project Year One: 2006-07

The first year of the project was the planning and capacity building year. Participating schools were selected and randomly assigned to their treatment group, evaluation tools were finalized, school district personnel advised, curriculum was developed and baseline data was gathered.

Project Year Two: 2007-08

Teachers received a total of 54 hours of direct *AI* professional development for Groups A and B between August 2007 and June 2008 with Artist-Mentors as the primary instructors and coaches. The training was a combination of hands-on learning of arts content, skills and knowledge; training in concept-based learning and performance based assessments; classroom coaching and mentoring; professional learning communities; and cultural study trips. Training components for teachers in Groups A and B included:

- A 30-hour Summer Institute for teachers featured participation in dance, theater, and visual arts-infused lessons that teachers took directly back to the classroom and implemented.
- An eleven-hour school-year classroom mentorship that paired each teacher with an Artist-Mentor to coach the teacher towards autonomy to teach 10 arts-infused lessons (3 dance/math; 3 visual art/math, 4 theater/writing)⁴.
- Ten to twelve supplemental workshops during the school year expanded arts skills and knowledge. Teachers were asked to attend at least two of the three-hour workshops but could attend as many as they wished.
- Professional Learning Communities were facilitated twice yearly to implement *The Mastery Arc*, a curriculum mapping tool developed for the project; share learning and strategies across school sites; and develop systems tailored to specific school needs that sustained arts integration practices learned in the *Arts Impact* training.
- Cultural Study Trips provided opportunities for students to experience original artworks and live performances. Each teacher and their class attended a museum exhibition, and a dance or theater performance specifically designed for student audiences. Cultural partners included: Broadway Center for the Performing Arts and Tacoma Art Museum.

Project Year Three: 2008-09

During the third year all professional learning components listed above were repeated providing teachers with an additional 54 hours, totaling 108 hours of professional development for project years two and three. Dance and visual arts-infused lessons were the same as the previous year. Summer Institute instruction in those disciplines focused on applying the concepts in different contexts, adding lesson extensions and in visual art, exploring new media. The theater lessons were revised to reflect formative assessment results from the previous year.

Project Year Four: 2009-10

In the final year of the grant, the project sought to determine to what degree teachers and schools could independently sustain the model. By project design, there was not a third summer institute and teachers implemented the *AI* lessons on their own, without a classroom mentorship. Teachers were asked to take students on a cultural study trip and attend supplementary workshops during 2009-10 as well. Funds for study trip admissions or transportation were not provided in the final year as they were in the previous two years. Two Professional Learning Community (PLC) meetings were held in the final year. The fall

⁴ The complete set of lessons for the *AI/AL* project can be found on the *Arts Impact* website at www.arts-impact.org.

PLC mapped the project lessons into the math and writing instructional calendar using the Mastery Arc mapping tool. The spring PLC provided opportunity for teachers to share student learning outcomes and plans for sustaining the work after the conclusion of the grant. *Arts Impact* staff provided technical assistance to teachers and principals as needed during the final year.

PROJECT GOALS, OBJECTIVES, AND INDICATORS

The following goals, objectives and indicators guided the project evaluation design and measurement tools.

Goal 1: Improve standards-based arts education for all participants.

- Objective 1.a. - Students in Group A or B schools **score 20% higher on the Student Arts Knowledge Test** than students in Group C.
- Objective 1.b. - 80% of Group A and B **teachers complete all training components.**
- Objective 1.c. - 80% of Group A and B **teachers document lesson extensions.**
- Objective 1.d. - 80% of Group A and B **teachers teach 45 hours of standards-based arts-infused lessons** each year.

Goal 2: Strengthen standards-based arts instruction in the elementary school grades through principal training, school based planning, arts team development, and sustainable infrastructure

- Objective 2.a. - Group A schools develop and implement a K-5 multi-year arts education plan.
- Objective 2.b. Principal training, school based planning, and arts team development will strengthen indicators of increased standards-based arts instruction as measured by the Project Exit Survey.

Goal 3: Improve the academic performance of elementary students.

- Objective 3.a. - Group A and B students demonstrate **20% greater achievement for narrative writing concepts in standardized testing** than students in Group C.
- Objective 3.b. - Group A and B students demonstrate **20% greater achievement for geometric sense math concepts in standardized testing** than students in Group C.
- Objective 3.c. Group A and B students **meet 70% of lesson criteria on performance based assessments for visual art, dance and geometric sense math concepts taught through arts-infused lessons.**
- Objective 3.d. - Group A and B students **meet 70% of lesson criteria on performance based assessments for theater and narrative writing concepts taught through arts-infused lessons.**

Goal 4: Improve teacher knowledge and practice to teach arts-infused concepts.

- Objective 4.a. - 80% of Group A and B teachers meet criteria **in standards-based arts knowledge, skills and concepts as measured by performance-based assessments.**
- Objective 4.b. - 80% of Group A and B teachers demonstrate **growth in arts-infused teacher practice as measured by the Autonomy Rubric for Teachers.**
- Objective 4.c. - Group A and B teachers score **10% higher on measures of Powerful Teaching and Learning as measured by the STAR Protocol©** than teachers in Group C.

Goal 5: AI/AL model replicated locally and disseminated at state, regional, and national levels.

- *AI/AL* model **replicated with fidelity in three additional schools** outside the region.
- *AI/AL* model and products **disseminated.**

RESEARCH QUESTIONS

The questions guiding this research are based on the goals cited in the grant and include:

1. To what extent are the program elements of the grant being implemented?
2. What is the impact of *Principal Arts Leadership* training on the extent that schools are integrating standards-based arts education into the core curriculum?
3. What is the impact of professional development in the arts on teacher to integrate the arts?
4. What is the impact of professional development in the arts on classroom teaching aligned with educational reform in the state of Washington?
5. How is the *Arts Impact/Arts Leadership* model being sustained, replicated, and/or disseminated?

RESEARCH DESIGN

The research design included qualitative and quantitative measures in a mixed-methods model, which allowed for formative and summative data collection. This approach enabled project leaders to improve implementation during the course of the project and to assess outcomes in an ongoing manner, while also enabling evaluators to measure fidelity of program implementation, determine the impact of program components, and provide information for on-going program development.

School Sample

At the outset of the project, AI/AL leaders identified 12 PSED elementary schools meeting the basic criteria of greater than 35% free or reduced lunch and a willingness to participate among third, fourth, and fifth grade teachers and school leaders. From this pool, four schools were randomly assigned to one of three experimental groups: Group A, *Arts Impact* and *Arts Leadership* (AI/AL); Group B, *Arts Impact* (AI Only); Group C, no treatment (Control). The first three schools assigned to each group were invited to participate in the project, with the fourth school serving as alternate in the event that a school dropped out prior to the study. One alternate replaced a school in Group A. Table 1 presents the nine schools participating in the study with the district, school enrollment, free and reduced lunch rates, and number of teachers in third, fourth, and fifth grade teachers at the outset of the project. For the analyses of student and teacher data in this project, Group A and Group B were combined and are referred to as the “treatment group.”

Table 1.

School, districts, free/reduced lunch⁵ levels, and initial teacher participation numbers

	District	Total School Enrollment	Free/Reduced Lunch	Number of Teachers		
				3 rd grade	4 th grade	5 th grade
AI/AL: Group A						
Birney	Tacoma	362	67%	3	2	2
Centennial	Bethel	658	43%	3	4	3
Larchmont	Tacoma	404	67%	2	3	2
AI Only: Group B						
Fawcett	Tacoma	431	68%	1	2	2
Spanaway	Bethel	382	52%	2	2	2
Wainwright	Tacoma	263	60%	2	1	3
Control: Group C						
Downing	Tacoma	309	42%	1	2	3
Manitou Park	Tacoma	636	74%	4	2	3
Shining Mountain	Bethel	645	48%	4	4	4

⁵ <http://reportcard.ospi.k12.wa.us/>

Teacher attrition occurred during the course of the project. Factors contributing to attrition included changes in teacher assignments (e.g. grade level, school), teacher illness, and death. A few chose to discontinue the program. Changes in the two school districts involved in the program also influenced teacher participation. The most important of these changes was internal reorganization resulting in teachers being moved or released. Teacher data was included in the final analyses only if they participated in all three years of the program (21 treatment teachers) or participated consistently in data collection for the same three years (20 control teachers).

Principal Data Sources

- ***School Arts Plan***

The project collected a school arts plan from each of the Group A schools. The plans were revised annually to insure alignment with current dynamics within the school or district. Each plan had required components but could vary in format.

- ***Project Exit Survey***

The *PAL* data collection tool was created to measure a school's yearly progress in the *PAL* program. A 2009 study by AdvisArts Consulting, *Anchoring Arts Education* identified stages of effective implementation of the program goals by examining the experiences of principals and schools involved during the *PAL* program's first five years. The research identified four stages that influence the success of *PAL* in a school, and thereby have an impact on students and the community. The project exit survey was administered to the nine schools participating in this project. Principals completed the online survey at the end of the project reporting on activities including principal training, school based planning, arts team development and sustainable infrastructure. Questions that were specific to *PAL* program participants only were not included in the results tabulation.

Teacher Data Sources

Throughout the grant period, project personnel and the external research team collected a range of data from treatment schools, as well as a subset of data was from control schools. The following data sources contributed were used:

- ***Document collection and analysis (Treatment Groups)***

Various documents pertaining to the *Arts Impact/Arts Leadership* project and grant activities were reviewed, including training materials, meeting agendas, and program communications.

- ***Teacher engagement (Treatment Groups)***

In 2007-08 and 2008-09 the project documented the number of hours each teacher completed of the following training components: summer institutes, mentorships, supplementary workshops, and professional learning communities. Student criteria-based performance assessment data, evidence of student learning (video or digital photographs) and participation in a cultural study trip were also recorded.

- ***Teacher criteria-based performance assessment (Treatment Groups)***

Artist-Mentors assessed teacher learning in the summer institutes using criteria-based performance assessments on every lesson taught. Criteria identify the attributes of the learning targets established for each lesson—what the learner does, says, or writes to demonstrate understanding of the target. Artist-Mentors and a curriculum and assessments specialist vetted the criteria. Teachers self-rated criteria from a sampling of lessons. The ratings from the Artist-Mentor and the teacher were compared

to establish co-rater reliability. Criteria-based performance assessments were only applied to teachers in Groups A and B because Group C teachers do not receive *Arts Impact* training.

- ***Autonomy Rubric for Teachers (Treatment Groups)***

The Autonomy Rubric for Teachers (*A.R.T.*)⁶ is a four-point analytic rubric that measures attributes of arts-infused teaching in two areas: teaching and assessment. There were five strands in teaching and two strands in assessment used for this iteration of the instrument. Artist-Mentors used the tool to objectively reflect on the teacher's level of autonomy in both years of training, 2007-08 and 2008-09. Teachers rated themselves using the A.R.T. in the final year of the project 2009-10.

- ***Focus Groups and Interviews (Treatment Groups)***

Evaluators met with *Arts Impact* and *Principal Arts Leadership* program directors during the planning year and at the end of each subsequent year to obtain implementation information. Teachers in the *Group A and Group B* schools participated in focus groups at baseline and in the spring of each year. Researchers also interviewed *Arts Impact* Artist-Mentors at baseline and at the end of the two mentorship years.

- ***Teacher Journals: Intensity and qualitative findings (Treatment Groups)***

The project collected teacher journals in 2007-08, 2008-09, and 2009-10. The journals documented hours of arts-infused teaching, lesson extensions developed by teachers for the project lessons, and qualitative comments about impact of arts-infused learning on students and the effectiveness of project components.

- ***STAR Observation Protocol (Treatment and Control Groups)***

The STAR Observation ProtocolTM was used to assess classroom instruction for evidence of *Skills, Knowledge, Thinking, Application, and Relationships*. Baseline observations occurred in spring of 2007. Observations to assess progress occurred in spring of the two implementation years (project years two and three) and the sustainability year (project year four).

Student Data Sources

- ***Student criteria-based performance assessments (Treatment Groups)***

Teachers and Artist-Mentors measured student learning on the *AI* lessons using the same criteria-based performance assessments that were used for rating teacher knowledge in the summer institute. Criteria identified the attributes of the learning targets established for each lesson—what the learner did, said, or wrote to demonstrate understanding of the target. This student data was collected from Group A and B classrooms for the two years they received mentorships (2007-08, 2008-09) and the final year (2009-10) when teachers were implementing the lessons independently.

- ***Arts Knowledge Test (Treatment and Control Groups)***

The Arts Knowledge Test (AKT) is a 25-item multiple-choice test that assesses knowledge of dance, visual arts, and theater. Students in third, fourth, and fifth grades of the nine schools completed the test in September (baseline) and May annually during the implementation and sustainability years.

- ***Washington State Achievement Tests (Treatment and Control Groups)***

The initial research design included group comparisons on overall and strand scores from the math and

⁶ Autonomy Rubric for Teachers. 2003. Developed by Puget Sound Educational Service District *Arts Impact Training Teachers to Teach the Arts AEMDD* project.

writing components of the Washington Assessment of Student Learning (WASL), a criterion-referenced standardized test of student academic achievement. At the outset of this grant, project leaders predicted WASL outcomes for specific content areas in math (*Geometric Sense* strand) and in writing (*Content, Organization, Style, and Conventions* strands) would improve for the students of *Group A and B* teachers as compared to Controls. Unfortunately, two significant changes in administration of the state assessment prevented monitoring that prediction.

In 2009, the state stopped reporting scores for individual WASL content strands, releasing only overall scores. These omnibus scores, aggregated across all strands, greatly reduced the utility of WASL as a meaningful measure of program outcomes. Specifically, it was no longer possible to isolate the content areas targeted by the *Arts Impact* lessons. Further, the WASL was discontinued and replaced in 2010 by the Measurements of Student Progress (MSP). For the final year of the grant period, then, the WASL was used to determine if there were baseline differences among groups, while the MSP was used to determine group differences existed at the end of the year. Any conclusions drawn regarding group differences in MSP results at the end of Year 3 are, at most, speculative, as there is no baseline data using this instrument.

PRINCIPAL LEARNING AND OUTCOMES

Goal 2: "To strengthen standards-based arts instruction in the elementary school grades 3-5."

PAL is building schools' capacities to offer high quality instruction to their students in all four state mandated arts disciplines (dance, music, theater, and visual art) while creating a network of committed principals to support one another over the long-term.

Principal Learning and Leadership/ Impacting Principal Engagement

Development of *PAL* was originally inspired by findings in the Arts Education Partnership's (AEP's) landmark study, *Gaining the Arts Advantage*, which stated: "Principals create the expectations and climate in the school building, and their support for arts education is essential."⁷ This research reinforces similar findings from sources such as the Washington State Arts Commission (WSAC) whose 2005 Arts Education Research Initiative (AERI) report found that "principals are uniquely positioned to influence the culture of the school to ensure that the arts are built into school staffing and budgets and to articulate the value of the arts to parents, district administrators, and school boards."⁸

PAL was originally engaged in the Department of Education AEMDD AI/AL research project to test the premise that: "***schools whose principals participate in training will be more successful at arts integration than those with teacher training only.***" To demonstrate this, the program identified the **development of an Arts Plan** as one outcome and had anticipated that the impact of this engaged leadership would show up in several ways including: increased instructional time in the arts, increased teacher professional development in the arts, and increased spending on the arts. While Group A schools were 100% successful in their completion of an Arts Plan, in practice, measurement of the associated benchmarks of engaged leadership proved difficult (for instance, re: funding — there is not a tracking system in school budgets to disaggregate specific dollar amounts for the arts) and the results were likely to be imprecise and not meaningful.

⁷ Arts Education Partnership, *Gaining the Arts Advantage: Lessons from School Districts that Value Arts Education*, (1999), 12.

⁸ Washington State Arts Commission, *Washington State Arts Education Research Initiative (AERI), Arts for Every Student* 2006.

At the outset of the project period, *PAL* was at a very early stage of development and numerous program enhancements implemented since that time changed the indicators ArtsEd Washington looks for to determine impact. As the project got underway promising results emerged in other cohorts of schools going through *PAL* prompting a comprehensive evaluation of the program to identify which elements of the *PAL* have the most/least impact on arts instruction.

Findings from this evaluation report led to unexpected outcomes of ArtsEd Washington's arts leadership coaching during the grant period — the identification of **four critical stages of development and implementation** in *PAL* schools. The report found these four stages were experienced more or less sequentially by each of the participating *PAL* schools with some revisiting of stages along the way as the program matured and evolved. These four stages have become the framework against which ArtsEd Washington now measures progress in arts leadership development and provision of arts education.

Arts Leadership - Four Critical Stages of Development and Implementation

Stage 1: Catalytic Spark — The *PAL* process is built on connecting with or igniting a catalytic spark in a school's leadership. This is the first step and a critical component present in all successful *PAL* schools. Where principals and key staff members have a personal passion for the arts, and sometimes a significant pedagogical interest and belief in the arts as an effective learning tool, *PAL* takes root most effectively.

Stage 2: Dynamic Shared Leadership — The second stage is dependent on propelling interest and empowered involvement within a school. This is characterized by the development of an Arts Team where the principal is joined by several key staff members in taking an active role in encouraging interest and building participation within the school community. Successful principals provide a clear vision, take part in developing goals, model risk taking through publicly joining in arts activities, offer flexibility to teachers and pursue fundraising opportunities to support additional arts program requirements. Arts Teams with dynamic single or shared leadership that organize regular planning meetings, and drive activities, lesson plan development and opportunities for incremental growth had the strongest impact and potential for sustainability.

Stage 3: Effective Systems and Tools — A wide range of systems and tools are employed by schools to enhance arts knowledge, skills and capacity, encourage school wide participation and promote community support for arts education. Professional development that provided technical teaching skills and lesson plan development were cited by all schools as fundamental to their success.

Stage 4: Sustainability — Though the principal is frequently the initial driver of the *PAL* program, a sustainable commitment to arts education requires that school wide cultural change take place in order to continue this commitment beyond the principal's tenure. Schools that distributed planning and integrated lesson development amongst a wider range of teachers and staff members appeared most able to encourage this kind of transformation. In addition, the wider distribution of responsibilities tended to have a multiplier effect as these staff members reached out to volunteers, parents and community members who could advocate for arts education at the school, district and state levels. Schools that are moving towards a cycle of renewing and expanding interest and knowledge are building the strongest base for sustainability.

Data Collection/Survey Design

The identification of the four critical stages shaped the design of the new data collection tool. Questions were developed to correspond with and measure progress across each key stage. This survey was used as the end-of-grant assessment tool with all nine schools in the *PAL* project at that time. Surveys were completed by school principals upon program completion and reflect their understanding, assessment, and perceptions in the context of the project. Results must be interpreted with some caution, given the

small sample sizes of this project. Specifically, there were three schools and therefore three principals. In each of three groups: the schools receiving the *Arts Impact* training and *PAL*, the schools receiving *Arts Impact* training only and the schools in the control group. Full details of the survey design are included in *Appendix A: Survey Design*, as well as a copy of the survey in *Appendix B: Project Exit Survey*.

Contextual Factors Influencing Principal Outcomes

There were some limitations to the pilot survey and results that can be alleviated by expanding the number of participating schools in future studies. As noted above, the current results must be interpreted with some caution, given the small sample sizes of this project. The small data set made it impossible to analyze results of individual questions with any reasonable statistical reliability. Because of the small number of schools participating in the research project, data was analyzed in aggregate to identify trends among the groups and improve statistical reliability of the results.

Group numbers were also small and it is possible that external factors affecting the schools may have impacted programming at the schools and therefore the results of this project. Groups B and C also experienced leadership transitions in the final year of the program and prior to the survey/data collection and two Group B schools lost treatment teachers to reduction in force and movement to other schools which undoubtedly impacted their reporting. Additionally there were ArtsEd Washington challenges with staff turnover.

Principal Outcomes

- ***Arts Plan Development and Implementation***

The key *PAL* objective for meeting project Goal 2 was the completion of an Arts Plan. At end of the Planning Year (June 2008), **all three *PAL* schools completed an Arts Plan** – identified as a Most Valuable Component of the *PAL* program 2009 research, but also highlighted as a difficult process. This finding fueled ArtsEd Washington’s revision of the Planning Year process and led to the customized facilitation tools piloted with the three *PAL* schools as they exited the project in June 2010.

Central to the original plans was the teacher-training program that was being provided by *Arts Impact*. This was the main piece of plan implementation during the first two years of *PAL*. As the *Arts Impact* training ended and the Artist-Mentors were no longer present in the schools, the role of *PAL* moved into sharper focus. Principals and school Arts Teams realized that they themselves needed to develop the sustainability of their investment and not rely solely on visiting teaching artists or other external supports.

An increase in principals’ engagement in the *PAL* program was observed during the final project year, (2009-10) with one principal commenting that she’d seen the difference the arts had made for her students and she didn’t want to lose it. Another said “[*PAL*] made me focus here with an art committee with goals. This made it possible to include K-2 and 6th [in arts planning].” Still another noted “[*PAL*] filled a gap. We used part of the stipend to have the music teacher organize and lead the field trips and to organize materials and check them out.”

In June 2010, each of the three *PAL* principals participated in *PAL* training with Arts Team members, although there was a marked difference between the level of participation from one school that had a principal change and a significant staff tragedy, and the other two. Those two *PAL* schools have continued with plan implementation including sending additional teachers to *Arts Impact* training and hiring teaching artists to help continue to build teacher skills and provide mentoring opportunities. (See Arts Plans Appendix C.)

- **Project Exit Survey**

With the new Critical Stages framework in place, a revised *Arts Leadership* objective emerged: Objective 2.a. –“Principal training, school based planning, and arts team development will strengthen indicators of increased standards-based arts instruction as measured by the Project Exit Survey.”

The PAL Project Exit Survey responses were coded to track achievement in the areas of Dynamic Shared Leadership, Effective Systems and Tools, Sustainability, as well as an added category, Arts Integration – a key area of the research hypothesis for the tool. Characteristics of the **Catalytic Spark** stage of development are now measured in the *PAL* “readiness to benefit” application tool and were **not** a fundamental focus of the Project Exit Survey. For the *AI/AL* project, schools were assigned randomly so the normal application process which screens for readiness-to-benefit was not conducted. Analysis by category follows.

Dynamic Shared Leadership (DSL) –Questions in this area primarily measure activities that create a framework for building and encouraging leadership and include use of leadership resources, Arts Team composition and methods, and the principal’s role in arts programming improvements. In this category, Group A showed positive performance trending in 53% of that category’s questions vs. 0% for Group B and 6% for Group C. This suggests that the *PAL* program has a positive impact on building arts leadership within a school including encouraging the principal’s role in developing and sustaining arts programming improvements and supporting shared leadership amongst Arts Team members.

Effective Systems and Tools (EST) –Questions in this area measure activities that help schools identify, develop, and build systems and tools for arts knowledge, skills and capacity. Issues examined include professional development, arts improvement plans, lesson plans and curricula development, student assessment, arts events, and arts visibility. In this category, Group A showed positive performance trending in 70% of questions vs. 15% for Group B and 26% for Group C. This indicates a positive impact of *PAL* program participants identifying, developing, and building systems and tools that assist their schools in expanding arts knowledge, teaching skills, and capacity.

Sustainability –Questions around this stage examine issues relating to teacher engagement in arts learning, community connections, and use of the arts in recruiting students and teachers. Group A showed positive performance trending in 65% of questions vs. 20% for Group B and 25% for Group C. *PAL* program participants demonstrated higher trends in activities that enhance teacher engagement, support school wide arts programming, and build sustainable infrastructures for continued arts programming.

Arts Integration—Questions in this area relate to integrating arts education programming throughout the school’s culture, planning, and curricula. Here, Group A showed positive performance trending in 100% of questions vs. 10% for Group B and 30% for Group C. This suggests that the *PAL* program catalyzes and is better able to support school wide change, and create and sustain curricular impacts on a broader variety and number of students.

The table below provides a summary of the trends found in each of the Groups. Full data from the survey is included in *Appendix D: Project Survey Data*.

Table 2. Positive Trends among the Groups

	Group total⁹	Category total¹⁰	%
Group A: n=3			
Dynamic Shared Leadership	9	17	53%
Effective Systems & Tools	19	27	70%
Sustainability	13	20	65%
Arts Integration	10	10	100%

Group B : n=3			
Dynamic Shared Leadership	0	17	0%
Effective Systems & Tools	4	27	15%
Sustainability	4	20	20%
Arts Integration	1	10	10%

Group C: n=3			
Dynamic Shared Leadership	1	17	6%
Effective Systems & Tools	7	27	26%
Sustainability	5	20	25%
Arts Integration	3	10	30%

Principal Leadership - Conclusions

The data suggests that the rewritten research hypothesis for the *Arts Leadership* Goal is on the right track. Schools in Group A, produced higher achievement trends than other groups in areas of leadership development, arts education program growth, and sustainability and use of arts integration teaching based on the PAL Project Exit Survey.

While important trends were identified in this research, it would be beneficial to evaluate specific aspects of principal training, school based planning, arts team development, and sustainability with more detail and statistical confidence. A larger pool would also ameliorate the effect of inevitable school leadership and teacher transitions as well as offset the exceptional situations presented in this project's participant pool.

⁹ This column shows the collective number of positive trending responses by the schools in each group to survey questions in each category.

¹⁰ This column shows the number of questions included in the Exit Survey relating to each particular category of measurement.

TEACHER PROFESSIONAL DEVELOPMENT AND LEARNING OUTCOMES

Goal 1: To improve standards-based arts education for all participants.

Goal 4: To improve teacher knowledge and practice to teach arts-infused concepts.

Transformations in Teacher Practice: Key Findings on an Arts-infused Teaching Practice

Making an impact isn't taken lightly or just a moniker for *Arts Impact*. The goal is to change teachers and therefore to improve instruction and student learning. Does the classroom teacher want to change? Does the classroom teacher today have time to change? Do principals believe there is an arts advantage in the teaching practice? And most importantly, what does it take for a teacher to change their practice—to include the arts as a viable part of their overall teaching?

In order to find the bottom line to affect change, *Arts Impact* has defined the Key Features of its professional development. Among the driving forces of its work, these premises have become fixed pillars.

Key Features.

- **You can't teach what you don't know.** While teachers often attest to loving the arts, most teachers did not have a sequential arts education in the arts as a K-12 student (in this case, dance, theater and visual arts), nor did they have more than a 'dip your toes in the water' arts education course in their pre-service preparation for their teaching certification. Infusing concepts in the arts requires arts knowledge and practice in the arts. Can you teach playing the piano without first playing it yourself? **At *Arts Impact*, teachers spend 60 hours in summer institutes across two summers** immersed as students of the arts.
- **You can't infuse what you don't know.** Research has shown that finding authentic arts-infused concepts relies on understanding the shared traits and dimensions of those concepts between subjects.¹¹ The first year of planning for the project included work with curricula specialists and *Arts Impact* staff to identify concepts authentically shared by mathematical geometric sense in dance and visual art and theater and narrative writing. Teachers informed Artist-Mentors; Artist-Mentors informed teachers. Shared knowledge expanded understanding of the merits of arts-infused learning and essential concepts that transcend individual classroom disciplines.
- **Assessments are surety about what you want students to know and do at the planning level and assessments are shared understandings between teacher and student.** Performance-based assessments depend on a clear target and transparent criteria—a common understanding for a common endeavor. Each concept for each grade level, for each lesson, for each teacher was measured. Assessments become valid and reliable data when an interrater agreement can be established.
- **Teachers change over time and require intensity in training to assure mastery teaching.** The fact that there were two years of training in this project, and one year of sustaining practice is significant unto itself. Using a vetted protocol, Autonomy Rubric for Teachers, the project rated teachers on their planning, teaching, and assessing.

¹¹ Consortium of National Arts Education Associations, *Authentic Connections: Interdisciplinary Work in the Arts*, (2002).

- **Artist-Mentors, using a coaching model, enable teachers to become independent teachers of the arts.** While the teaching artist can serve a variety of vital roles in the classroom, the *Arts Impact* model uses teaching artists as coaches.
- **Art museums and performing arts venues provide dynamic exemplars of arts concepts.** For *Arts Impact*, community partners are more than partners—they are integral to the work. From planning to site sources for training, from study visits to live resources, the art museum and performing arts organization associated with the program not only provide living examples, but sustain teaching assets.
- **Arts-infused teaching can be an integral part of the overall strategies for classroom teaching.** The *Arts Impact* model supports teachers with a variety of strategies and tools to integrate the arts into their classrooms, actively supporting the logistics of their arts-infused teaching as well as the content of their work.

Teacher Outcomes

Teacher outcomes are reported in aggregate for Group A (*Arts Impact and Principal Arts Leadership*) and Group B (*Arts Impact only*). Both groups received the exact same *Arts Impact* treatment and support. The measures reported on here reflect the impact of *Arts Impact* only and not *Principal Arts Leadership*. For this section of the report “treatment” refers to teachers from both Group A and B and “control” to teachers from Group C.

- **Teacher Knowledge**

At third, fourth and fifth grades teachers demonstrated at least 97% of the concepts/skills in dance, theater and visual arts. This is not surprising, given that teachers were learning arts concepts and skills identified in state standards for intermediate students. But getting past stereotypes and long-held beliefs by many teachers that you are either born artistic or not takes on the gradual acknowledgement that art concepts can be learned by all. This understanding opens up extensive possibilities for learning personally and transferring arts understandings to students. Teachers demonstrated understanding of arts-infused concepts in training before teaching arts-infused concepts in the classroom.

- **Interrater Reliability**

For third, fourth and fifth grade teachers, there was an inter-rater agreement of 97% or higher. Artist-Mentors rated teachers on all criteria of all lessons taught in the summer institute. Teachers self-rate on a sampling of lessons as well. A high percentage of agreement between Artist-Mentors and teachers is desirable and is an indication that teachers not only learn a concept but also recognize demonstration of the concept in the same way the instructor recognizes it.

- **Autonomous Arts Teaching**

After three years, over 90% of teachers met teaching performance levels of 3 or 4 as rated by Artist-Mentors, and in the third year, met this performance level as rated by the teachers themselves. Teachers rated themselves as continuing to improve in five of the eight strands in the last, sustaining year of the project, assuring that teacher growth would continue even after formal professional development ended. Findings show a significant upswing in arts-infused teaching practice between year one, two and three of training.

Engagement

In both years of **mentorship, over 95% of teachers completed their 11-hour mentorships**—a testament to their engagement in the project. Qualitative findings report teachers valued their Artist-Mentors' roles as coaches.

"Every aspect of my *Arts Impact* training has been thorough and masterful. Because of the well-crafted lessons, I will be able to fly solo every year in the future. I have learned a wealth of arts concepts. It has been a privilege and a pleasure to work closely with all these mentors. They have been a major influence and inspiration to me and my teaching."

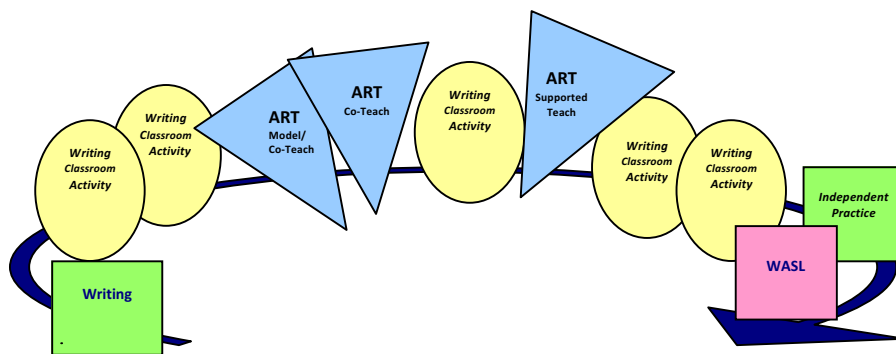
For the first **summer institute, 75% of teachers completed all 30 hours with an average of 27 hours** completed for all teachers. In the second year, 51% completed all 30 hours with an average of 21 hours completed for all teachers. This decline in summer institute attendance was due to several factors: a change in when summer school at one district was offered creating a conflict in schedule for two teachers who already signed a contract to teach summer school; several family emergencies; and one group of teachers who had been paid to attend by their principal the for the first summer institute but not the second.

- **Study Visits to Cultural Institutions**

In years one and two of training, over 95% of participating teachers took students on a cultural study visit to a museum exhibition, dance performance or theater performance. Teachers relied on the cultural institutions as an active dimension of their teaching. Of concern, with declining school budgets, was the drop in teacher use of the cultural institutions in the third year of sustaining practice when only 29% of teachers took students on a cultural study visit. Reduction of travel budgets for student study visits and focus on limited core subjects were attributed for this dramatic change in cultural use over time.

- **Facilitating Arts-infused Teaching in the Classroom**

Teachers reported a significant increase in their arts-infused teaching in 2007-10. **Teachers in the Arts Impact/Arts Leadership project reported an average of 43 hours of arts-infused teaching per reporting teacher in 2009-10. This is a significant change in their teaching approach for the classroom teachers enrolled in training. Using a Mastery Arc graphic organizer to plan arts-infused teaching gave teachers a tool to further support purposeful use of the arts throughout the school year.**



- **General Classroom Instruction**

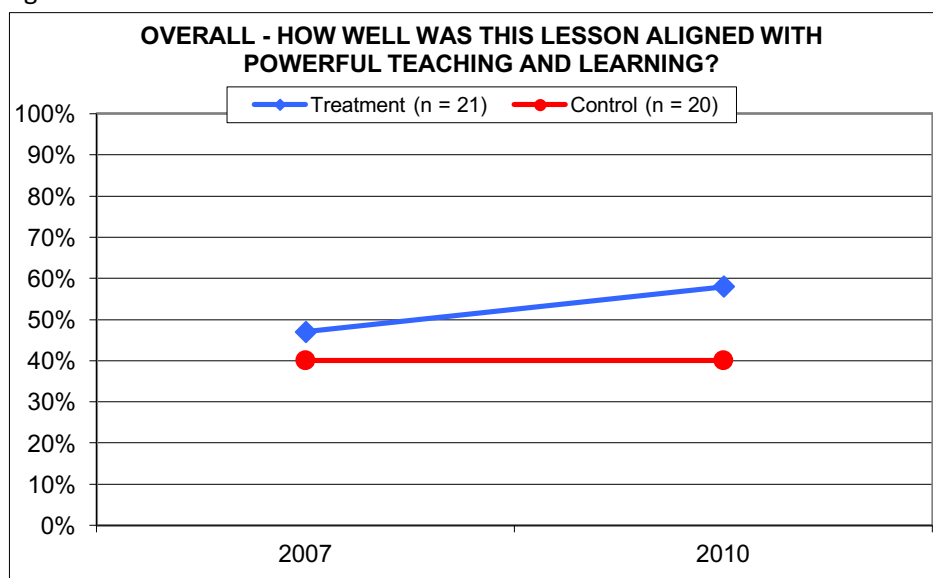
In addition to providing training and curricula for a number of specific lessons, *Arts Impact* provided opportunities for teachers to build instructional capacity beyond *Arts Impact* lessons. It was hypothesized that improvements in instruction would generalize beyond *Arts Impact* lessons and

become evident more generally in writing and math. As the instructional approaches of *Arts Impact* are conceptually aligned with the tenets of Powerful Teaching and Learning™, the STAR Classroom Observation Protocol™ was used to determine the extent to which changes occurred in general instructional practices. If participation in *Arts Impact* training changes general instruction, treatment teachers should exceed control teachers on the STAR Protocol.

Classroom observation data from treatment teachers who participated in all three years of the project was compared to data collected from control teachers who participated in evaluation activities over the same period. For all groups, fluctuations were evident across the Components and Indicators of the STAR Protocol over time, but final outcomes for the treatment group exceed control group outcomes. At baseline, the treatment group was stronger than the controls by 7 to 15 percentage points on the areas of *Skills, Thinking, and Relationships*. The controls were stronger by 7 percentage points in *Knowledge*. There were no real group differences in *Application*. **At the end of the project period, treatment teachers were stronger than controls by 8 to 32 percentage points in all five areas.**

The groups differed only slightly on the 15 Indicators at baseline, with the treatment exceeding controls group by 5 percentage points or more on 7 of the 15 Indicators, while control group was stronger in five of the Indicators by 7 to 17 percentage points. At the end of the project period, the treatment group was stronger than controls by 5 or more percentage points on 12 of the Indicators, with no appreciable differences between the groups on the remaining three. As shown in Figure 1, **these data suggest that over the three years of the project period, there was greater development of general instructional capacity for teachers in the treatment group than for controls.** In particular, STAR data showed improved outcomes for treatment teachers in Indicators associated with conceptual knowledge, lesson relevancy, and application of content knowledge.

Figure 1.



Contextual Factors Influencing Teacher Learning and Outcomes

A number of factors influenced project implementation and monitoring of outcomes. During the project period, two significant changes external to *Arts Impact* affected the alignment of *Arts Impact* lessons with ongoing instruction. First, the **state educational system modified grade level learning standards**. This included shifting the sequencing and grade level targets of certain content and benchmarks, which

dismantled the intentional alignment between *Arts Impact* lessons and the state's grade level requirements. Second, **curriculum changes occurred in both participating districts**. In addition to affecting alignment, teachers found it challenging to incorporate the *Arts Impact* lessons into a curriculum unfamiliar to them. Other factors affecting implementation commonly reported by teachers were a lack of time to prepare, mandated adherence to curriculum pacing guides, student movement among teachers for math or writing instruction, and varying levels of support and involvement from other staff members.

Other significant school- and district-level initiatives, such as Response to Intervention, measures associated with Adequate Yearly Progress, and other building initiatives, competed for teacher time and focus. District accountability requirements and direction also shifted during the project period, dividing principal and teacher commitment. Finally, the state educational system implemented changes in assessments and standards during the project. These changes made it impossible to examine the target outcomes specific to this project or to look at impact over time using standardized student assessment data. In addition, teachers reported losing preparation time in learning about the new district assessment and instructional time in preparing students for it.

Teacher Learning – Conclusions

Given intense and sustained training, teachers can improve their practice to infuse the arts into other core content areas. In addition, there are indications that professional development in the arts improves teaching practice across all subject areas. In particular, performance based assessments with clear learning targets and criteria provide teachers with information that informs their teaching and makes assessing learning in the arts and other content objective.

STUDENT LEARNING OUTCOMES

Goal 3: To improve the academic performance of elementary students.

Student expectations need to be teachable and observable—and understood in the same way by teacher and student. As teachers learn, so students learn. The overall day-to-day student learning was measured lesson-by-lesson and student-by-student. Success was based on the ability of students to demonstrate arts and arts-infused concepts/criteria in arts-infused lessons associated with the more traditional subjects of geometric sense and narrative writing. All targets for student performances were vetted by Artist-Mentors, arts education curricula and assessments staff, and ultimately by the teachers in training.

In arts-infused math, students studied attributes of polygons and congruence, symmetry, parallel and perpendicular lines, translations, reflections, transformations, and angles. In narrative writing, students explored adverbs, character attributes, dramatic story introductions, story sequence, key events, story resolution, transitions and use of precise vocabulary.

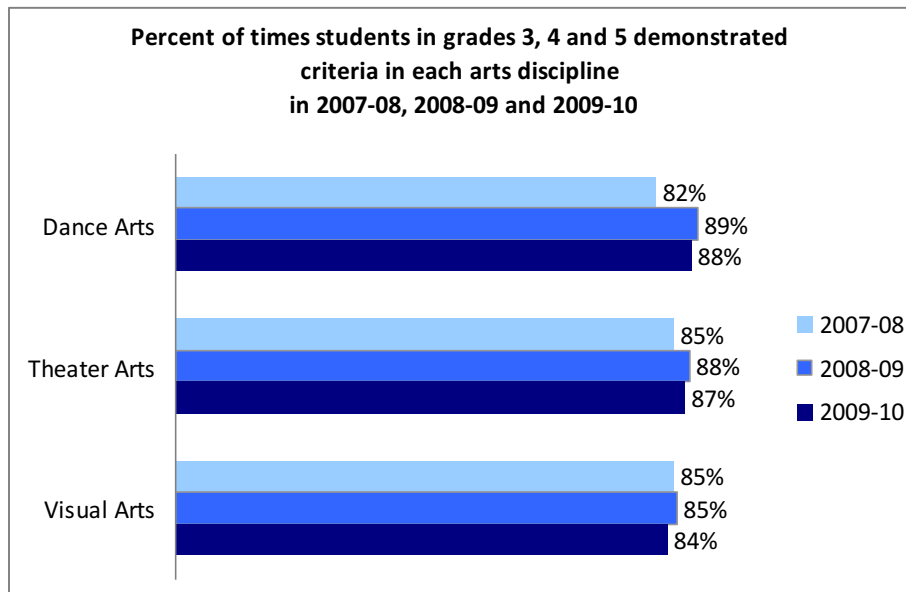
School budget decline and resulting school reform reduced the number of students in the study. The number of students participating in these sampled performance-based assessments totaled 937 students in 2007-08, 866 students in 2009-09, and 467 students in 2009-10. The decline in student numbers related directly to teacher reassignment to other classrooms outside of the research project dimensions during school budget decline and resulting teacher layoffs or reduction in force. While regrettable, the final student numbers allowed continued reliability in reporting results.

Student Outcomes

- **Performance-based Learning and Assessments**

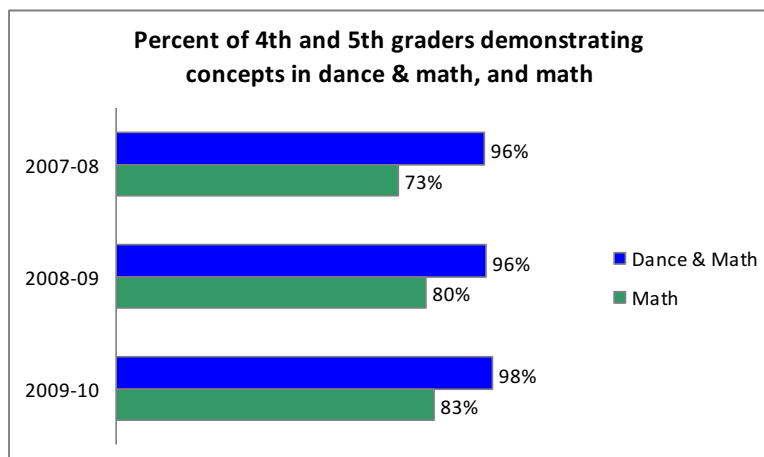
Students exceeded the goal of meeting 70% of the criteria in each arts discipline overall with a performance level of over 80% of the criteria met for all three arts disciplines. Students sustained a performance level of over 82% throughout the three project years in all three arts disciplines. This testament to day-to-day classroom learning reflects the kind of everyday assessments data teachers need to analytically work one-on-one with their students in real classroom time and differentiate instruction for students with different learning styles and educational needs.

Figure 2.



Students demonstrated geometric sense understandings a greater percent of times using dance than as a math performance alone (Figure 3). Math concepts were taught in two ways—infused with dance activities and using traditional math worksheets. While not a research goal, data revealed a noteworthy finding when comparing these two different teaching strategies. In dance-infused math at fourth and fifth grades, students performed at higher percentages using dance to show geometric sense than when using math strategies alone. Still to be explored is if there is value in introducing a math concept first through dance followed by traditional reinforcement or the reverse sequence. Unknown at this time is whether a specific sequence of activities in dance and math could have an effect on student understanding of math concepts.

Figure 3.



- **Arts Knowledge Test (AKT)**

During each year of the project, students took the AKT in the fall (annual baseline) and in the spring (annual progress measures). In each year of the project period, 78% to 83% of the students who completed the fall AKT also completed the spring AKT. Only students with scores for both the fall and spring of a given year were included in analyses. Analyses showed that scores for students in the treatment group were statistically higher than control students on the dance portion of the AKT. It is uncertain why this finding occurred, though dance is the least often taught arts discipline in elementary schools—so there may have been more opportunity for a statistical difference in this category. Since selection of the Arts Knowledge Test four years ago for this grant, the testing protocol is no longer used or available from the source nationally.

- **Washington State Achievement Assessments.**

Arts Impact/Arts Leadership worked directly with teachers on integrating the arts with math and writing, using shared concepts to improve understanding and to reinforce knowledge. At the outset, project leaders predicted outcomes on the Washington Assessment for Student Learning math (*Geometric Sense* strand) and writing (*Content, Organization, Style, and Conventions* strands) segments would improve for students of treatment teachers as compared to controls. As noted previously, the state ceased reporting strand-level student data for this assessment, and the aggregated scores made it impossible to compare treatment and control students on the targets specific to *Arts Impact* curricula. During the final year of the project, the state replaced the Washington Assessment of Student Learning with the Measurements of Student Progress. Without baseline data for treatment and control groups on this test, it cannot be used as a reliable outcome measure for determining group differences.

Contextual Factors Influencing Student Learning and Outcomes

In addition to the factors pertaining to program implementation and monitoring, several factors directly affected student learning and outcomes associated with *Arts Impact* lessons. During the first year, both teachers and Artist-Mentors commented on the surprising lack of basic art skills necessary to complete tasks within the *Arts Impact* lessons. For example, an Artist-Mentor commented, “We went in with expectations that they could use scissors, write a sentence...” Another person observed, “Students lack the most basic art skills. Fifth graders haven’t had experience with materials and cutting, for example. This impacted what they were able to get out of the math piece. To make a work of art that shows their math knowledge is an application of those skills.”

In the second and third year of *AI* implementation, some fourth and fifth grade teachers found students began the year with stronger arts skills due to their exposure to *Arts Impact* the year before. However, this was not always the case due to external factors. “We had huge influx of new kids with no *Arts Impact* background because (of school building/district) boundary changes. It was really evident in fourth and fifth grade,” according to one teacher. In addition, the *Arts Impact* lessons were constructed in alignment with specific Washington state grade level learning expectations, but classroom instruction often differed from those expectations as teachers differentiated instruction to meet student needs that were not performing at grade level. This required Artist-Mentors and teachers to adjust goals, activities, and lessons.

Finally, the impact of professional development on student learning is unlikely to be immediate. The pipeline of change involves a series of sequential events, from instruction of teachers to initial classroom implementation to teacher mastery and finally to improved student learning. Lag time can be expected, and other contextual factors, such as curriculum adoptions and changes in learning standards, are likely to increase the transmission time.

Student Learning - Conclusions

Standardized testing is the chief quantitative measure currently required to show student learning for the Department of Education AEMDD grants. The grant requirement is reflective of the current national measurement of student learning based on standardized testing.

Concern by families and teachers continue to raise these questions: How much time should we spend on formalized testing during the school year? How can the design of standardized testing remove cultural bias and assure accessibility and an accurate story about all learners? What *are* the best measurements to reliably and validly reflect learning?

For the *Arts Impact/Arts Leadership* project, the constant that surpassed high stakes testing was day-to-day, lesson-by-lesson vetted performance-based assessments. This measure was approached and viewed by student, teacher and teaching artist in the same way with a shared focus on learning. When aggregated over time and across students the learning results for treatment students were highly reliable and valid. Performance-based assessments allowed students to act on their own learning in the moment. Performance-based assessments empowered teachers to change teaching immediately to reflect current understandings about their students—not wait for a standardized test to know student-learning results. And the interrater reliability factors for the performance-based assessments attest to their value as a primary instrument to document student learning and change.

The effect of arts disciplines to impact overall learning through shared concepts is still in the early stages. What seems certain is the ability to integrate shared arts, math, and literacy concepts to expand understanding and reach a greater number of students. Additionally, the ability of classroom teachers to teach the arts at a basic, integrated level can be learned through systemic and in-depth training. Students can be reached through arts integration; classroom teachers can be the conduit.

REPLICATION AND DISSEMINATION

Goal 5: To replicate the AI/AL model outside the region and disseminate at state, regional, and national levels.

Arts Impact/Arts Leadership also investigated the feasibility of replicating the model in sites outside the Puget Sound region. Because of the independent nature of the two organizations, Puget Sound

Educational Service District and ArtsEd Washington have not yet been fully realized a unified replication model. Mutual endorsement and promotion, however, continues. Both organizations are actively working on replication models made possible for PSESD through a newly awarded AEMDD grant (2010-2014) and foundation funding. ArtsEd Washington is working to expand *PAL* via partnerships with the Association of Washington School Principals, ongoing internal research and development work, and exploration of a pre-service model in collaboration with the Arts Education Partnership's Higher Education Working Group.

Arts Impact Replication

The underlying premise of successful transfer of *AI* to regions outside of Puget Sound is development of local resources—teaching artists, program administrators, sponsoring organization, community and cultural partners, and funders. Because of the intense and sustained nature of the *Arts Impact* model it is not feasible for PSESD *Arts Impact* personnel to travel to other regions and implement the program. A measure of success was the degree to which a site was able to implement the Key Features of *Arts Impact*.¹²

In 2008-09 and 2009-10 PSESD developed and implemented a pilot *AI* replication model that included the following components:

- 90 hours of training for teaching artists and program administrators over two years that included attending *AI* summer institutes, observations of *AI* Artist-Mentors coaching teachers in the classroom, participation in PSESD *AI Artist-Mentor training and planning retreats*.
- Technical support from *Arts Impact* staff for planning and implementation.
- Resources: *AI* curriculum, administrator's handbook, evaluation and assessment templates.

Arts Impact was piloted in three sites outside the Puget Sound region, home to the *AI/AL* project: Roosevelt Elementary School, Bellingham, WA in partnership with Allied Arts of Whatcom County; Lincoln Elementary, Wenatchee, WA in partnership with Wenatchee Arts Education Consortium (WAEC); and Educational Service District 105 in Yakima, WA. Bellingham is located about 100 miles north of Seattle near the U.S.-Canada border. Wenatchee is in central Washington 150 miles east of Puget Sound on the east side of the Cascade Mountains, a natural dividing line between the urban area of Seattle in Western Washington and the more rural areas of Eastern Washington. Yakima is located 144 miles southeast of Seattle and is rural. All of these locations are a significant distance away from Seattle, the urban and cultural center of Washington State and vary in city size, geographic location and the degree of local resources that are a part of the *AI* Key Features.

Of the three sites, one—Roosevelt Elementary in Bellingham—replicated the model with greatest fidelity. Each of the *AI* Key Features was manifested in their implementation of a whole school *AI* model over two years. Roosevelt was also enrolled in the *PAL* program. Especially notable for a first time implementation was the degree of replication in the areas of assessment and evaluation to include reviewed lesson plans written by teachers-in-training, analyzed student learning results, and detailed reports. The Bellingham model implemented all *AI* assessment and evaluation instruments and strategies including sharing results with key stakeholders.

Factors that contributed to Bellingham's successful implementation of all the *AI* Key Features included: a strong program administrator with significant arts education background and experience; fully engaged

¹² *Arts Impact Key Features*. www.arts-impact.org. 2009.

and supportive principal and faculty; whole school participation; district support; highly experienced teaching artists; participation in *Principal Arts Leadership*; healthy arts and cultural community; and multiple funding sources.

At Lincoln Elementary in Wenatchee the model was adapted slightly, offering training in theater and visual arts only and focused on strengthening collaboration between classroom teachers and the visual art specialist to infuse the arts with literacy. Although Wenatchee had tremendous interest and desire to implement the model, they were able to complete only one year of training for teachers at Lincoln and had to put further *AI* replication efforts indefinitely on hold.

Program administration and funding were the two greatest factors impacting Wenatchee's replication efforts. The project manager left the position shortly after they began replication training. That job was assumed by the full time visual arts specialist to keep the project moving forward. She was able to sustain this dual role for a year and successfully guided their replication team through a summer institute and mentorships. However, with severe funding declines and the inability of WAEC to hire a new project administrator, the project had to be placed on hold.

ESD 105 in Yakima adapted the *AI* model considerably to better align with arts education programs already in place. Yakima did implement a new teacher training model for their region *Art Integration Mentors (AIM)* that included elements of *AI*. The *AI* component most closely transferred was the summer institute. Elements included in the *AIM* model that were influenced by the *AI* replication training but were adapted, included a common lesson plan format, performance based assessments, mentoring of teachers, and teacher written lesson plans. The *AIM* program administrator and the teaching artists did participate in a second year of training with *AI* however, indicating a desire to incorporate more of the *AI* pedagogy if not a close replication of the model.

Based on outcomes of this replication pilot, PSESD submitted a proposal and was awarded a U.S. Department of Education AEMDD grant (2010-14) to replicate the model in the eastern part of Washington State in partnership with Educational Service District 101. This new project, *Arts Impact Dissemination and Expansion (AIDE)* is now in its second year and is meeting Key Features of *Arts Impact* in its early stages. Lessons learned from the pilot *AI/AL* model and applied to strengthen likelihood of successful replication included the following readiness to benefit factors: strong program administrative leadership and infrastructure of the sponsoring organization; teaching artists with specific qualifications and experience aligned with *AI* pedagogy; willing school districts and committed principals; strong community cultural partners.

Dissemination

The project disseminated project best practices, findings, and lessons learned through conferences and on-line methods—website, email, e-newsletter. In addition, products developed during the project have been disseminated via multiple print and on-line media.

Products developed and disseminated include:

- 2007: Mastery Arc, a curriculum planning tool
- 2009: National webinar focused on assessments and evaluation
- 2009: Four Critical Stages of Development and Implementation
- 2010: Training for 15 teachers on performance-based assessment on-site in Bethel, Alaska
- 2010: Updated website that includes a searchable lesson plan data base of over 200 lessons including the arts-infused lessons developed for *AI/AL*

- 2010: One of three projects featured in an AEMDD case study on models with promising practices likely to be replicated
- 2011: Video demonstrating key components of the project model

Conference presentations are as follows:

- 2008: Americans for the Arts, Las Vegas
- 2008: Department of Education AEMDD Project Directors' Meeting
- 2009: Americans for the Arts, Seattle
- 2009: Arts Education Partnership, Washington DC
- 2009: National webinar on assessments and evaluation
- 2010: Arts Education Partnership, Boston
- 2010: Association of Washington School Principals Conference, Spokane
- 2010: Department of Education AEMDD Project Directors' Meeting Plenary, Washington DC
- 2010: The Kennedy Center National Partnerships Leadership Conference, Washington DC
- 2010: National Staff Development Council, Seattle
- 2010: Southeast Conference for Education and the Arts, Chattanooga
- 2010: VSA International Conference, Washington DC
- 2011: Arts Education Partnership, Washington DC

CONCLUSIONS

The opportunity to research the value of combined principal leadership training and rigorous teacher development in the arts and arts-infused learning has resulted in new understandings. This research project was conducted during fragile economic times and dramatic and on-going school reform. And yet the majority of principals and teachers sustained throughout the rigorous expectations.

For each recipient of the project, trends emerged over time for each of the three primary grant participants—teachers, students and principals—as well as for organizations wanting to replicate the model. In addition, recommendations for teachers and principals, project implementation and further research are suggested.

Emerging Trends

For Principals

- Principal leadership training can improve the level of standards-based arts instruction in the school by developing principal interest in and knowledge about the role of arts education.
- Involvement of the broader school community—principals, teachers, parents, and community members—can facilitate change towards greater inclusion of the arts.
- Development of an arts plan keeps the arts focus visible and dynamic for the school.
- Principal development improves culture and environment to sustain teachers who gained capacity to infuse the arts through the intense and sustained professional development of *AI*.

For Teachers

- Given sufficient and intense training over time, classroom teachers can gain knowledge of and demonstrate arts and arts-integrated concepts.
- With professional development in the arts and arts-infused learning, classroom teachers can guide students to learn math and literacy concepts through the arts.

- Clear targets and transparent criteria through arts performance-based assessments provide teachers with information that informs their teaching, and provides students information that makes the learning process objective and enlightening.
- Arts-infused instruction gives teachers a tool to reach students who struggle with math and literacy.

For Students

- With purposeful arts-infused instruction, students find new ways to understand and demonstrate arts, math and literacy concepts.
- Performance-based assessments with clear targets and transparent criteria provide information students can use to analyze and advance their own learning.
- While needing further research, the valid conceptual intersections provided by dance, theater and visual arts give students more opportunities to show their knowledge.

For Organizations

- Ability to increase school culture for the arts and teacher capacity for teaching arts-infused concepts relies on an overall “readiness to benefit”: principal leadership; teacher commitment to professional development, and a stable school district environment.
- Commitment to professional development requires a steady funding stream that ultimately results in line item budgets for on-going training and support of arts in the classroom.
- Successful implementation of a sustained and intense, quality professional development and principal leadership training requires a strong program administrator with knowledge and experience in arts education.

Recommendations

The funded period was a time of great discovery, progress, and evolution for *Arts Impact* and *PAL* programs. From this research the following recommendations emerged:

- **For Research**

- 1) **Multiple measures needed for accurate measure of student learning.** There were several challenges associated with using state assessments to monitor change in this project. Multiple changes in state-level achievement assessments limited the ability to compare test scores over time. In addition, data reporting from the state assessments changed. Whereas it was possible to obtain data pertaining to the specific content strands pertinent to this project, this level of reporting was not available after the first year. Further, the state assessments are broad, and an unpredictable and typically small number of items were applicable to the project. Thus, while the project focused on specific state learning strands, the state assessments did not provide consistent or stable data due to changes, reporting limitations, or small numbers of items. Problems with instrumentation that are beyond the control of these and similar studies point to the necessity of multiple measures. Multiple measures enable triangulation of the data and provide some redundancy in data collection.
- 2) **It takes time to effect change.** Grants and outcomes monitoring change often end before full impact on desired outcomes, such as student achievement can be detected. It is advisable to consider monitoring intervening variables, using instruments and indicators correlated with the desired outcomes.

- 3) **Increase research efforts on the conditions needed for principals and teachers to sustain use of their training over time.** Professional development is only as sound as a participant's continued use of their new knowledge and skills in teaching and learning.

There will be continued challenges on the educational horizon: how learners best make gains, educators reach all students equitably, and learning is validly and reliably measured. The *Arts Impact* and *Principal Arts Leadership* research models required a significant commitment of time and investment of funds. What financial and systemic support is needed to continue to support committed teachers, principals and professional development organizations? How can we sustain teachers and principals as they challenge themselves to apply their best understandings with all core classroom disciplines—including the arts?

- ***For Implementation:***

Presence of attributes and capacities of readiness are key to success. Given the experimental design of this research project, the schools selected to be part of *AI/AL* were selected by a random drawing, however, in the implementation of *Arts Impact* and *PAL* outside of this project, schools opt-in and show attributes and capacities for readiness. With the external pressures of standardized testing in limited content areas, and competing pressures for time and resources, it can be the case that principals and teachers will choose to undertake arts-focused initiatives like *PAL* or *Arts Impact* only when feeling secure about their progress in other classroom discipline areas.

Readiness is also an indicator for successful replication in which key success factors are related to administrative leadership, teaching artist expertise, engaged principals and teachers, and sufficient resources are needed.

- 2) **Pro-active professional development.** In order to be more entrepreneurial about arts integration, it is recommended that an adaptation of the *PAL* and *Arts Impact* models be developed for the pre-service training of principals and teachers so that they emerge as new administrators and educators ready and equipped to lead and sustain quality arts education in their schools.

- ***For Principals***

- 1) **Articulate a clear commitment to the role of arts in education, in the school, and in any arts initiatives underway in the school.**

As the cornerstone of a successful arts initiative for any school, a principal needs to articulate his or her personal belief in the power of the arts. Schools experiencing the greatest success with *PAL* are those schools in which the principal has developed his or her pedagogical thinking as well as interest and passion for the role of the arts in education and for the school. When these elements are in place there is the ability to move forward with greater clarity and purpose in all aspects of the initiative.

- 2) **Ensure that the work of the arts in the school is broadly shared and supported.**

The principal is a key player but cannot create change alone. A core of individuals who work with the principal on the *PAL* program, or other arts initiative, is critical. This is the method by which the teaching staff, and hence all students, are reached. Interest and support from the majority of the teaching staff is a powerful tool, when possible. There is even greater success when the broader school community of parents and volunteers is engaged.

- 3) **Create and use methods, tools and systems that keep the arts focus visible and dynamic for the school.**

Each school has its own culture and approach that works for that community. Certain methods, tools and systems appear to be useful across the differences of individual schools, though they are developed to reflect the unique character of the specific school. Identifying and strengthening such approaches can embed the arts in a more sustainable way in the school community. Develop a School Arts Plan as a road map to guide your efforts.

4) Ensure that arts endeavors in the school are celebrated and supported within and beyond the walls of the school.

Identify ways to celebrate students' artistic efforts and accomplishments within the classroom, the school, the district and in the community. Finding ways to take the school's arts focus beyond the school is also part of building a sustainable level of support and creating lasting change.

- ***For Teachers.***

1) Seek rigorous on-going professional development in the arts and other classroom disciplines.

Identify professional development opportunities that are concept-based; provide multiple strategies in learning: modeling, co-teaching, independent practice, and coaching; and allow time to practice and master new teaching strategies.

2) Use formative and summative performance-based assessments to equitably inform learners about new knowledge and skills and to guide subsequent instruction.

Include vetted targets and criteria for learning that are transparent to students, teachers, administration and families. Report out on learning formatively while changes and adaptations can still be made, and summatively with clear 'next steps' for teaching and learning.

3) Advocate investment in and funding for professional development in the arts at the district and school building level.

Identify the value of professional development in the arts for students and their teachers. Report out on the specific changes arts professional development has had on student learning and instructional success at the district level and to boards of education.

4) Advocate for the value of arts education in the classroom and as part of a life-long education.

Identify the value of the arts in all its multiple layers: different ways to know concepts, different ways to show concepts, inclusivity for all students, the value of the creative process for all students, and the ability to create personal and collective meaning.