A Viable Assessment Alternative: Assessing the Impact of Professional Development on Arts Teachers Technology/Arts Integration in their Arts Integrated Curriculum

Louanne Smolin, Ed.D, Principal Investigator, Project ATLAS Joseph Spilberg, M.A, CAPE Research Program Associate

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Project ATLAS Overview

The Arts Teachers Leading Achievement & Success (ATLAS) Project is a sustained and intensive program of arts integration professional development designed to strengthen the integration of the arts and technology with other core academic content.





Professional Development: A Research Framework



Context such as school leadership, arts presence





PD Program Trajectory

From understanding technology as a tool to enhance artistic and teaching practice to utilizing technology infused processes in order to redefine artistic and teaching practice to create new ways of making and learning.

Year 1 PD Goal: What is Technology? Develop baseline competencies of technology (email, writing tool, image making, photo, and video.) Connect technology aesthetics with the art form they teach to build on their art specialty. Develop Big Idea and Inquiry Questions and form foundation for designing arts integrated curriculum.

Topics: Workshops on bridging digital technological art forms with analog/traditional art forms; Present examples of technology based arts integration projects; Discussion on various levels technology engagement; Present examples of artists who use technology to document events, time, space – understand language around art and technology; Reflection and Critique: Understand student learning through technology integration; Models to assess student learning; Assessment: Connect ISBE; Art & CC standards Year 1 Goal: Utilize technology as a creative material to augment and modify arts integrated teaching and learning. Fold in research and documentation in the teaching and learning process.

Topics: Medium is message: Explore the limits of digital apps to convey meaning (filters); Technology as material – Creating video sculptures; Explore relationship between technology and the body (dance/performance); Exhibition Practice: Curating and displaying learning; Documentation of Space (fine arts building) - Using Video, Audio, Photo: capturing a space through multiple perspectives; Artifacts - Finding Evidence of Inquiry and Collaboration; Understanding language of art and technology and connect with arts integration and education. Year 3 Goal: Utilize a re-conceptualized technological practice to teach and create fluidly between technology, art forms, content, and pedagogical methods. Connect curriculum with social or community engagement. Incorporate action research and curation practice.

Topics: Presentation and workshops on new media/artists to expand on materiality of technology; Workshops on Technology, Space and Time; Explore facets of "Coding" - history, the personal, the social, the symbolic, and connect with digital aesthetics. Understanding the intersection with computer coding as a means of creating through instruction. Connecting content knowledge and pedagogy. Curation and exhibiton: Reflection, Sharing, Critique.

Multiple Research Tools

- All Participants
 - Project ATLAS Performance Measure
 - Project ATLAS Pre/Post Survey
 - Project ATLAS PD Exit Survey
- Focal Participants
 - Project ATLAS Observation Protocol
 - Project ATLAS Teacher Interviews
 - Project ATLAS Portfolio Conferences





Project ATLAS Performance Measure

- ATLAS Participants represent multiple arts practices
- Outcomes of Project ATLAS are performance based
- Performance Measure enables:
 - Contextualization: using knowledge/skills/process in the context of arts/technology integration
 - Participants to put knowledge/skills/processes gained in ATLAS professional development to use
 - A performance that relates to the content of what is being assessed





Project ATLAS Content Areas of Performance

- Arts Integration
 - Inquiry centered curriculum
 - Documentation
 - Creating Artsworks
 - Collaboration





Project ATLAS Content Areas of Performance

- Technology Integration
 - Process/rationale of selection of technology resources
 - Student use of technology/directing their learning
 - Enhancing learning environment with technology integration
 - Alignment of technology with student learning outcomes
 - Technology contribution to student's higher order thinking
 - Technology contribution to student's creative expression
 - Impact of technology on teaching practice





Project ATLAS "Bulb" and Performance Prompts

Directions: Below are questions that will help you to complete your Project ATLAS Digital Portfolios. Complete this survey based off of an class art project completed prior to 2015-2016.

For each question, please include your written reflections. You are also encouraged to provide other multimedia to deepen your written reflections and exemplify your analysis. Multimedia can include images, sound files, and video clips.

Please annotate your multimedia, describing why you have chosen these particular artifacts, what you are interested in your audience knowing about them, and why they are important to share.

Section I: Arts Integration – Documentation. Please upload documentation from your project. Please include a variety of media forms for your documentation.

I. Documentation should not only provide a narrative, or story, of your project, but should also provide evidence of students' engagement in the unit inquiry.





Examples: Arts Integration

- **Documentation**: Student engagement
- <u>Documentation</u>: Ways in which students respond to project





Example Arts Integration: Collaboration with students



I planned the curriculum before the unit began. We are on a block schedule with this grade level, so I had a six week unit with each group. After I finished the first block rotation, I used the student reflections to help me tweak the implementation of the unit with the next homeroom. For example, one student suggested we rehearse in the auditorium more, so with the next group, I reserved the auditorium space for a week leading up to the final performance to help the students become more confident in this space. (Source: ATLAS Teacher Digital Template Performance Measure)

Development of ATLAS Performance Measure

- Thinking through content to establish learning outcomes
- Creating the operational definitions
- Writing the performance based question prompts
- Developing criteria for evaluation: rubric and scoring guide





Development of ATLAS Performance Measure: Criteria for Evaluation

- Develop rubric through analysis of outcomes
- Identify a range of examples for each outcome item in 3 4 levels of quality
- Assessment team evaluates a small sample of products/portfolios to flush out language for each item of the rubric
- Norming: 3 members of assessment team score a subset of 5 products/portfolios to come to consensus about each level of the rubric
 - Two to come to consensus
 - Three more to test reliability
- Cronbach's Alpha/Intraclass Correlation Coefficient
 - Discuss until both result in .7 or higher.
- Maintain reliability over time





Growth Areas

ATLAS Performance Measure Item Number	Construct/Atlas Performance Measure Item	Result	Percentage Increase
1	Multimedia/Multimedia for Documentation	t (14) = -2.256, p <.05	29%
2.	Multimedia/Documentation Depicts A Range of Work	t (14) = -2.48, p<.05	38%
7.	Arts Integration: Create Works/Teacher's Portfolio describes opportunities for students to self-direct while creating their own works of art	t (14) = -2.17, p <.05	21%
16.	Technology/Technology enhanced learning environment	<i>t</i> (14) = -3.54, <i>p</i> <.01	68%





Teacher Growth over Time: Student Self-Directed in Project

Pre Measure

• <u>Year 1</u>





For this unit, students were given three guidelines: the artwork must be a collaborative effort; the finished work must be 3 dimensional; the artwork must answer the inquiry question ("How dos a neighborhood become community?") for the viewer. As a group, students had to come up with their own ideas on how the finished piece should look, the materials that to be used, and the explanation on how their artwork answered the inquiry question. Each group presented their plan to the class for critique, had conference time with the teachers, and presented the final product at the end. Everyone was required to participate in the critiques and presentations, with the responsibility of presenting being equally divided between the group.

Students not only decided the subject of their stories, they did their own planning and writing. In small groups, they made decisions on story lines; created their storyboards and did their own camera work



Pre survey: No Response

Year 1 response

Students used technology not only to create their art, but to research their subjects as well.

Year 2 response

Students experimented with ways to make their anger pets display their attributes. They made choices in camera angles and movement, sound and some special effects that they invented. They researched sound effects and how to incorporate them into their videos. Those who chose to create stop motion videos had similar experiences, however needed more guidance than those using cell phone video. They also had to look at their final results and decide which style they preferred.

Teacher Growth over Time: Student Self-Directed in Project

The students have the freedom to design and make decisions as they chose. We did give them some limitations when it came to inspiration. By giving them some limitations in allowed them to explore their creativity with in the parameters. We found that what working with third-graders collaborative skills was a large focus and having a safe place to try out creativity and inquiry. Largely the lessons we presented were about artistic habit and how to manage them. The students endured their decisions through the artistic behaviors The students did students self-direct while creating their artistic work during the ATLAS project?

The students had choices and voice throughout the creative process. They chose their inspiration, they chose their materials. They also controlled their collaborative choices in working as a team. They were given tools like the wheel of choice to control their learning experience.



<u>Year 2</u>



Boone

Teacher Growth over Time: Student Self-Directed in Project

Pre survey: No Response

Year 1

I don't think the technology directed student learning, but instead was a tool for student communication and artistic expression.

The two apps on the iPads were used solely for research and the exploration of the works of art of Merce Cunningham. Although there were specific instructions as to which parts of the apps they should look at, because there were some dances I didn't want students to miss due to connections to the field trip and stations, the students also had the opportunity to explore the apps and learn about Cunningham on their own.

Year 2

The iPads helped with the rehearsal process because students were able to see their solos and adjust their dances to make them "better." This facilitated their experimentation of movement and impacted the ways in which they developed the choreography so that they would be more proud and confident in the dance before showing it to an audience. Their confidence grew through this exploration because by the time we had the performance, most students were pleased with how their solos turned out and they were no longer afraid to show their work. Many students invited their parents to the show, and at this age level, those invitations usually taper off. I probably had 12-15 families per homeroom in the audience, which is definitely more than in year's past.

Teacher Growth over Time: Tech Learning Environments

Pre survey: No response

- Example 1:
 - <u>Pre survey</u>
 - <u>Year 1</u>



16. How did you use technology to enhance the learning environment for both you as a teacher and for the students?

For my students, technology allowed them to bring their ideas to life. They were engaged and excited. This was a long process, but the students never seemed to tire. As the arts teacher, the technology portion was more difficult. I found that our imaginations often outgrew my technological knowledge. We often embarked on problem solving journeys together.





Pre survey: No Response

Year 1

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Year 2

We used technology as a tool for reflection of our work throughout the process.

Teacher Growth over Time: Tech Learning Environments

- Example 2:
 - pre survey
 - <u>Year 1</u>



to. How did you use technology to enhance the learning environment for both you as a teacher and for the students?

Internet access, LCD Projector, and laptop made it much easier to show students relevant examples, and provide context.

As I just said, I think the GeoGebra app engaged students in a different way than paper and pencil would have. It forced them to think mathematically in order to input the correct data into the app, and then showed them a perfect representation of their pattern, without the human error that comes from using rulers and compasses. This additional step allowed them to visualize the pattern before actually creating it. It was a bridge between the mathematical and artistic components.



Areas of Promise: Interdisciplinarity and Technology:

Areas of Improvement (plus construct) Percentage Increase	Areas of Improvement Percentage Increase
5. Unit inquiry supports students to engage in arts processes/research and interdisciplinary connections between the arts and academics. (Arts Integration/inquiry	10%
9. Teacher's portfolio demonstrates ways in which teacher's analysis of student artifacts impacted their teaching practice. (Arts Integration/Create Works)	31%
15.Students use technology to direct their learning	4%
17. Technology is appropriately aligned with arts integrated unit student outcomes	5%
18. Technology is used to develop students' higher order thinking skills	43%
19. Technology is used to develop students' creative artistic expression	40%
20.The online portfolio demonstrates teacher's ability to use technology resources to collect and analyze student artifacts for instructional improvement and enhanced student learning.	17%





Fort Dearborn Teacher Growth over Time: Tech alignment with goals and outcomes

Pre survey: No Response

Year 1

The use of technology and its role in this unit exceeded my expectations . It allowed the students to become involved in and see the final results of a process. They made a big investment in their learning.

Year 2

Anger was a very personal and reflective theme explored in this unit. The extensive use of the cell phone was a good fit. My goal in this unit was to go back and reflect and respond to what we discovered about our own anger. Unfortunately, we did not get the time to do that. Technology played a role in the creation of our artwork and the documenting of that art. It did meet my expectations for facilitating student outcomes. Fort Dearborn Teacher Growth over Time: Tech contribution to higher order thinking Pre survey: No Response

Year 1

The technology added a layer to this project that enhanced their understanding of the contrast between imagination and knowledge. The videos allowed them to bring their imagined stories to life and the use of technology made the research portion easier.

Year 2

Using the technology allowed students to separate themselves from their own anger (something very personal), enabling them to view it objectively. Self reflection and analysis were both possible because of the use of technology,

Spry Teacher Growth over Time: Tech contribution to higher order thinking

Pre survey: No Response	By using digital camera, I was able to uploaded all the portraits after the last partners finished taking their photgraphs. The next day I had the students view the practice photographs. They could analyze the images the next day to understand how they could take a better image and what they needed to think about when taking the final photographs.		
Year 1	Students reflected on what they learned. " I learned that portraits are pictures that are drawn by artists and drawn of a sitter. Also the coolest part of portraits is they look 3d, just like looking in a mirror."Samantha		
	"You need a sitter for it to be a portrait. There are 3 angles the face could be in, front, profile and 3/4. The sitter could have a prop, gesture and facial expression"Stephany		
	During the invade to greate the DSAs students had to self reflect when developing their work		
	After filming their work they reviewed what they filmed and made adjustments. If the scene was not what they hoped for they filmed it again. When it came time to editing they had to review		
	their storyboard or decide they would change them. Some groups needed to create new scenes to express the human right they were working with. A few groups had envisioned filming outside		
× 2	but as they began to experiment they quickly realized that they could not go outside due to the		
Year 2	weather and lack of supervision. Groups had to think about how they would use the spaces		
	about the images and allowed them to manipulated the images to express an idea. Although the		
	films are not polished they do show that students were challenging themselves to solve the		
	problem and communicate a human right to an audience.		

Performance Assessing: Lessons Learned

- Ongoing nature of reliability
- Keeping Participants informed
- Using results to modify/adjust professional development sessions





Portfolio Conferences:

Code	Total	Mean	Bar Graph	
art/technology integration	26	6.5		
arts integration	49	12.25		
arts integration communication	21	5.25		
arts integration exhibition	5	1.25		
arts integration outcomes	64	16		
arts integration outcomes connections	2	0.5		
arts integration outcomes persistence	2	0.5		
arts integration personal curriculum	14	3.5		
content knowledge science	2	0.5		
inquiry interpretation	21	5.25		
tech use example	8	2		
technology affordances for arts integration	30	7.5		
technology knowledge	11	2.75		
technology rationale	2	0.5		
technology use	1	0.25		

Total: 15

258





Future Analysis

- Potential variables impacting teacher outcomes:
 - Professional development sessions attended
 - ATLAS Teacher Pre/Post survey items
 - Growth modeling





Thank You and Questions!!



