

Developing the K-8 generalist teacher's pedagogy and
technical skills in the visual and performing arts

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North Coast Arts Integration Project

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Abstract

This paper is an evaluative investigation of the North Coast Arts Integration Project (NCAIP) funded by the U.S.D.O.E. from 2014 through 2019. The span of the investigation covers the 2014-18 years of NCAIP operations. Project goals were to integrate and strengthen standards-based arts instruction in eight rural schools located in two Northern California districts in Humboldt County. Kindergarten through eighth grade teachers self-selected to participate in professional development trainings and in class-coaching to develop their pedagogy and technical skills in the visual and performing arts. The central research question for this final paper is: Which NCAIP program components, structures or approaches were considered by the participating classroom teachers to be most effective in advancing their skills, knowledge, and motivation in teaching and integrating the arts in their classroom curriculum? Utilizing qualitative methods, findings revealed the most effective program components for developing teachers' pedagogy and skills were: 1. Coaching; 2. *See Wonder Think* (Artful Thinking teaching strategy); 3. Teaching Artists; 4. *Focus Five* (teaching strategies); and, 5. the Development of Teachers' Artmaking Skills.

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Developed by Eureka City Schools (ECS) in partnership with Klamath Trinity Joint Unified School District (KT) and Humboldt State University School of Education (HSU), the proposed project outlines a comprehensive, coordinated arts education program that integrates the arts (visual arts, music, dance, theater, media arts, and folk arts) throughout both the K-8 humanities classes (ELA and history/social studies) and the STEM classes (Science, Technology, Engineering, and Mathematics). NCAIP aims to improve student success in mastering the Common Core State Standards (CCSS) and Next Generation Science Standards (NGSS) by broadening and deepening arts learning, teaching, and integration in all K-8 classes. (North Coast Arts Integration Project grant application, AEMDD, U.S.D.O.E., p. 5-6)

Through a program of intensive, ongoing professional development and in-class coaching of self-selected teacher participants, NCAIP's goal was to integrate and strengthen standards-based arts instruction in eight rural schools located in two Northern California districts 60 miles apart in Humboldt County. Eureka, located on the Pacific coast, is the city (population approximately 50,000 in 2018), county seat, and school district of six of the schools served by the grant. The Klamath Trinity Joint Unified School District serving the Willow Creek-Hoopa Valley area (CDP population 5,925 in 2010) is inland where two of the NCAIP schools are located. Hoopa Valley is the home of the Hupa people who are among the earliest cultures of California. The 84,445 acre Hoopa Valley Reservation is the largest (in land mass and population) in the State.

The NCAIP grant proposal was submitted in Spring, 2014 and on September 19, 2014 Jack Bareilles, the lead grant writer and NCAIP Project Evaluator Administrator received word that Eureka City Schools had been awarded the four-year grant. Over the next four years, the NCAIP Project Coordinators were charged with the design, organization, and administration of the arts education program that would serve seventy-five teachers in eight schools. In this final, qualitative evaluative study, we focus on the

central question: Which NCAIP program components, structures or approaches were considered by the participating classroom teachers to be most effective in advancing their skills, knowledge, and motivation in teaching and integrating the arts in their classroom curriculum? The period of investigation is the 2014-18 span of NCAIP operations. The 2018-19 No-cost Extension Year (fifth year of operations) is not included in the study.

The overview that follows this introduction includes information on the Project Coordinator team and the design and structure of the four-year program. After that, the Methods section provides the framework and structure for the qualitative study and outlines the additional NCAIP research centered on student engagement that was also conducted during the grant period. The Findings and Discussion sections lay out the answers to our research question with the observation field notes and the teachers' words—recorded in journal reflections, group discussions in meetings and professional development settings and informal conversations—providing the evidence. Following this are two mini-cases that provide examples of the learning experiences of the NCAIP teachers and their students. The Final Discussion/Conclusion section includes a summary of the NCAIP No-cost Extension Year, as well as the arts education projects that have followed or benefitted from NCAIP's work in Northern California rural schools.

Program Overview

The Beginning of Operations

Although initially buoyed by their success in securing the grant, it was unsettling for the prospective NCAIP Project Coordinators to switch gears so many weeks after the start of the Fall semester. It was four weeks into the school year and the four coordinators were already working full-time (or more) as teachers, professors or administrators. As Mimi Dojka recalled, "We were supposed to start with the school year, and the public school year typically begins at the end of August . . . we didn't think that we had gotten the grant because we didn't hear anything" (personal communication, May 23, 2017). Dojka, identified in the submitted grant narrative as the Lead Art Scholar, was teaching full-time for the Art Department at Humboldt State University (HSU.) Coordinator Bill Funkhouser, named in the AEMDD grant narrative as the NCAIP Math Curriculum Coordinator, was teaching art and math full-time at Zane Middle School in Eureka. Coordinator Jennifer Lane,

named in the grant as the KTJUSD Coordinator, was Principal of Captain John Continuation High School in Hoopa. Coordinator Heather Gaiera—recruited, interviewed and hired by ECS after the grant was awarded—was teaching fourth grade at Grant Elementary School.

Nevertheless, by late November Eureka City Schools had interviewed and hired the two ECS teachers—Funkhouser and Gaiera—from their active teaching roster to assume full-time positions as NCAIP Project Coordinators. Coordinators Dojka and Lane were each hired at thirteen (13) hours per week which they added to their existing workloads. With approximately two weeks before the 2014-15 K-8 winter break the NCAIP Leadership Team finally assembled around a table together at the ECS District Office.

The Project Coordinators

According to Funkhouser and Gaiera the duties and responsibilities of the individual Project Coordinators were not agreed upon as a group and emerged organically from each person's strengths, time constraints, experience and background knowledge. Funkhouser recalled, "We kind of fell into our positions" (personal communication, March 14, 2017). As mentioned, Dojka and Lane had severe time constraints due to their other work commitments. Dojka's constraints eased after Year One, but Lane's did not. Lane's administrative positions did not allow for classroom visits during school hours so her NCAIP responsibilities did not allow for coaching and were restricted to administration. All other Project Coordinators served as NCAIP coaches in the classrooms as part of their overall duties and responsibilities. The number of hours spent on coaching varied with each Project Coordinator.

The make-up of the team evolved over the five years of operations. Funkhouser and Gaiera were successful in writing and securing another arts integration grant for Eureka City Schools in the third year of implementation and as a result, their NCAIP hours decreased at the beginning of the fourth year. Dojka left the project after the third year of operations and Sarah Peters was hired in August of 2017. Peters, who had been hired at ten hours per week in August of 2017, was increased to 20 hours then 35 hours per week shortly thereafter. A brief review of the six Project Coordinators' education and experience will illustrate the diversity of background knowledge and skills each member brought to the project.

Coordinator Dojka holds a B.A. in theater art design and a multiple subjects teaching credential from Humboldt State University, and a masters in art education from San Francisco State University. She taught at Humboldt State University for fourteen years in the Art Department and in the School of Education. She has professional, long-term relationships with a number of the community based organizations that had been included as partners in the grant proposal—Center Arts at HSU, Dell Arte International, Arcata Playhouse, and the Morris Graves Museum of Art (personal communication, May 23, 2017).

Coordinator Funkhouser, ECS middle school math and art teacher, holds a B.A. in liberal studies/mathematics from University of the Pacific and an M.F.A from Mills College in Oakland focusing on ceramics and sculpture. Named Humboldt County Teacher of the Year in 2003, Funkhouser had taught math for twenty four years and art for three at Zane Middle School at the time the grant was awarded (personal communication, March 14, 2017).

Coordinator Gaiera earned her B.S. in zoology at University of California, Davis and her multiple subjects teaching credential at Humboldt State University before teaching science in middle school for six years and then health for two years. After a brief hiatus, she taught first, fifth, and fourth grades (self-contained classrooms.) Before NCAIP, Heather was part of a leadership academy sponsored by ECS and the Humboldt County Office of Education and was encouraged by the ECS administration to apply for the NCAIP position because of her instructional coaching experience (personal communication, March 8, 2017).

Coordinator Lane majored in psychology and minored in Native American Studies at University of California, Davis and earned her teaching and administrative credentials at Humboldt State University. Lane has an extensive background as a violinist and pianist having performed with the Nevada State Orchestra and the University of California Davis Symphony. She is presently serving as principal of Captain John Continuation High School in Hoopa. In addition, Lane holds several positions in the Klamath Trinity Joint Unified School District: Curriculum Coordinator, Grants Management, Healthy Kids Coordinator, among others. Her professional background includes serving as principal at Hoopa High School and teaching and serving as Vice Principal and Principal at Hoopa Elementary School (written communication, August 13, 2018).

Coordinator Sarah Peters came on board in August 2017. Peters studied acting as an undergraduate at the Cincinnati College Conservatory of Music in Cincinnati, Ohio and then earned her M.F.A. at Dell'Arte International in ensemble theater creation and physical theater. After graduate school, she pursued a career as a performing artist and musician and as a teaching artist with young people. Peters has also taught Theater of the Oppressed, playwriting and singing at the undergraduate and graduate levels. Right before joining NCAIP, Peters had spent three years at Dell'Arte as a school administrator and teacher (personal communication, September 24, 2018).

Coordinator Dionná Fletcher joined the team in August 2018 for NCAIP's No-cost Extension Year. In addition to studying mime at Dell'Arte International, Fletcher trained in acting with Fred "Rerun" Berry and African Dance with Bokandeye African-American Dance Theater in New York City. She earned her B.A. in Theater Arts at Morgan State University in Maryland. Fletcher has worked as a teaching artist for the Baltimore Office of Promotion and the Arts and multiple Baltimore community programs (Peters, written communication, May 17, 2019; Fletcher, written communication, May 28, 2019).

Program Design

One of the first major programming decisions was to separate the K-8 participating teachers into three distinct cohorts—6-8 grades, 3-5 grades, and K-2 grades—and rotate planning and implementation years. The 6-8 cohort would be served first, piloting their planning/implementation in Spring 2015. Consistent, on-going coaching and professional development would begin for the 6-8 cohort of teachers in Fall 2015--after the 2015 four-day Summer Institute--and continue through the Spring 2016 semester. Third through fifth grade teachers would pilot their planning/implementation in Spring 2016. Consistent, on-going coaching and professional development for the 3-5 cohort would begin in Fall 2016--after the 2016 Summer Institute--and continue through the Spring 2017 semester. Kindergarten through second grade teachers would pilot their planning/ implementation in Spring 2017. Consistent, on-going coaching and professional development for the K-2 cohort would begin in Fall 2017--after the 2017 Summer Institute--and continue through the Spring 2018 semester. After each cohorts' full implementation year of coaching and

professional development, the classroom teachers would continue to have access to the NCAIP coaches, support and art materials, by request.

In Spring of 2018, NCAIP was granted a no-cost extension year by the USDOE. This fifth and final year has been designed to serve the Kindergarten through second grades and sixth through eighth grades at eight school sites in the two school districts: Eureka City Schools and Klamath Trinity. A more detailed description of the no-cost extension year is included in Final Discussion and Conclusion section.

Theoretical framework. Four arts education methods helped provide a framework for approaching professional development: *Making Learning Visible*, *Visible Thinking*, *Artful Thinking*, and *Studio Habits of Mind*. In the Spring of 2015, Coordinator Dojka introduced Funkhouser and Gaiera to these teaching and learning methods when she invited them to observe and assist in one of her HSU elementary credential classes (Fine Arts in the Integrated Elementary Curriculum.) The chief focus of Dojka's lesson was *Making Learning Visible* (Dojka, written communication, October 17, 2018). After networking with integration projects across the country, the team was encouraged by classroom teachers and arts educators who were making use of these philosophies/methods: "Try them . . . they work" was the consensus from the field (Funkhouser personal communication, March 14, 2017).

- *Making Learning Visible* is a conceptual framework centered on three aspects of learning in the classroom: (1) teachers and students as creators and transmitters of culture and knowledge; (2) the power of the group as a learning environment; and (3) the roles of observation and documentation in shaping and deepening learning across the curriculum (mlvpz.org);
- *Visual Thinking Strategies* (VTS) is a developmentally appropriate, learner-centered teaching method that facilitates discussions in the arts. Using a reproduction of a work of art, the teacher asks students to talk about the work as though thinking aloud (vtshome.org). Observation, identification, interpretation, speculation, and questioning are examples of the domains of thinking exercised and explored in a VTS lesson (Yenawine, 2013).

- *Artful thinking* is a program linked to VTS through Harvard's Project Zero that assists teachers in the development of students' thinking disposition by regularly using works of visual art and music and making connections with other subjects (<http://www.pz.harvard.edu/resources/works-of-art-are-good-things-to-think-about>).
- *Studio Habits of Mind* are cognitive and attitudinal dispositions that are taught and fostered in the art studio; and are central to learning across many other subject areas. Development of craft, observation, reflection, expression, engagement and persistence, envisioning, stretching and exploring, and understanding the art world are studio habits of mind (Hetland, et al. 2007).

Structure. After drafting a plan of attack for the four years, the project coordinators immediately began the process of informing principals and teachers that NCAIP had received funding. Coordinator Gaiera recalled the teacher recruitment process, "We spoke . . . we scheduled time at their staff meetings. And we went in guns blazing you know, like all the glory of good intentions and recruited lots of people and that felt really good . . . and so, then what?" (personal communication, March 8, 2017).

Recruitment brought home the distance between the two school districts in miles and culture. It also brought into focus the "busyness of every teacher's" schedule and how that could impact teacher participation if not factored into the programming (Dojka, personal communication, May 23, 2017). Mindful of these factors, the coordinators adopted the following components to structure the program:

- Teaching artists in the schools;
- Coaching sessions in the teachers' classrooms throughout the school year modeling and assisting teachers in *Artful Thinking* strategies such as *See Wonder Think*;
- A one-day Spring Institute and a Summer Institute (two to four days) to fully immerse teachers in learning new art forms, unpacking and aligning the Common Core and California Visual and Performing Art Standards, and planning lessons and units;

- Monthly meetings with teachers at school sites;
- Teacher trainings that would take place after school hours and focus on a single art form or strategy;
- Monthly teacher reflections submitted to and replied to by the Project Coordinators;
- Field trips for classroom teachers and their students to HSU's visual art galleries (planned/coordinated with the HSU Art Department through their Service Learning and Art Education courses);
- Field trips for classroom teachers and their students to performing arts events at HSU (planned/coordinated with the HSU Department of Theatre, Film and Dance); and,
- Stipends and graduate credit units offered for teacher participation hours.

Research Methods

NCAIP adopted a mixed methods approach in its evaluation and documentation of the four-year program: Quantitative methods were used to measure student engagement in the participating teachers' classrooms and qualitative methods were used to investigate teacher perceptions of the program components, structures, and approaches that were most effective in advancing their skills, knowledge, and motivation in teaching and integrating the arts. Four of the Project Coordinators (three from the original team and one project coordinator hired in 2017) and one research intern (fourth year addition to the team) assisted the Principal Investigator with data collection. In the fourth year an outside observer was hired for quantitative/qualitative post treatment data collection in the K-2 classrooms. An independent contractor was hired to transcribe interviews and meeting audiotapes.

Student Engagement

Data Collection. In Fall of 2015, the second year of the grant project, the team began measuring student engagement across all subject areas in each participating teachers' classroom. To measure student engagement, project personnel developed, tested, and established inter-rater reliability of a classroom observation instrument (See Appendix

B.) During a classroom visit, the observer noted student engagement in increments of 15 to 20 minutes with 5 minutes in between each increment. The engagement levels are as follows:

Level 5: Creative student engagement

The student is actively using personal creativity, expression or choice. The student's unique needs, desires, viewpoint or history are integrated into the work.

Level 4: Active student engagement

The student is actively doing something other than sitting in receptive mode. They are doing what is asked (solving, writing, graphing, etc.) but not bringing personal, creative elements to the work.

Level 3: Passive/Receptive

The student is sitting quietly as expected by the teacher. They may have a book or paper in front of them. They are not distracting others but not actively doing anything other than watching/listening.

Level 2: Not engaged/ Retreatism

The student is disengaged from the task. They are not disruptive. Examples of this could be daydreaming, head on desk or looking elsewhere.

Level 1: Disruptive/Distracting

The student refuses to participate in the task, disrupts or distracts others.

For example, in a given observation of a classroom with 25 students, the observation record would include 75 if three 15-minute segments were observed (or, 100 if four 15-minute segments are marked) tallies across the five levels, indicating the number of students observed at each of the levels of student engagement in the classroom. Then, for each classroom observation, a weighted average of the tallies was used to produce an "engagement index" of the classroom observation (NCAIP Observation Document; Oliver, 2018, *Final Summary Report*).

Observations were scheduled randomly and conducted multiple times in each teacher's classroom before (pre-treatment) and after (post) teachers had participated in an intensive arts professional development Institute (4 days of workshops held in the

Summer.) The post treatment period included teaching-artist residencies, on-going in-class coaching of the classroom teachers, additional professional development sessions, monthly meetings and teacher written reflections.

Utilizing the NCAIP Observation Instrument, seventy-seven (77) 6-8 grade classroom observations were conducted during the 2015-16 school year. Due to the late start of grant implementation, all observations of the 6-8 cohort were conducted after the August 2015 Institute (post-treatment.) Eighty-five (85) pre-treatment observations of the 3-5 cohort began in the Spring 2016 semester and fifty-seven (57) post-treatment observations were conducted the school year following the Summer 2016 Institute. Ninety-nine (99) pre-treatment observations of the K-2 cohort began in the Fall 2016 semester and fifteen (15) post-treatment observations were conducted in 2017-18 following the Summer 2017 Institute. In an effort to reduce bias on the part of the observers who were also the coordinators, the team decided to hire an outside researcher in the last semester of grant implementation to observe the K-2 teachers teaching an arts lesson—with no assistance from NCAIP coaches or teaching artists. Observations of these lessons were scheduled in advance and the NCAIP Observation Instrument was used to measure student engagement and record field notes on curricular details, environment and pedagogy. The external observer established inter-rater reliability by piloting the observation instrument with the coordinators in non-participant classrooms.

Student Engagement Data Analysis and Findings. Dr. Dale Oliver, Humboldt State University College of Natural Resources Interim Dean and Mathematics Professor provided an analysis of the quantitative data. Dr. Oliver summarized his findings:

We were not able to conduct a quasi-experimental design with a control group, and thus we cannot answer the question about the impact of the NCAIP on student learning with support from quantitative data analysis. We were able to note some promising trends in test data for students in middle schools who had at least 50% of their teachers participating.

After the first cohort (grades 6 through 8 teachers) we redirected our data collection and analysis efforts for the second (3 – 5) and third (K – 2) cohorts to

answer the question: what is the impact of the NCAIP on student engagement in the classroom? The results, which are statistically significant and which are confirmed in three different ways, are promising. We observed that for teachers participating in the NCAIP, there was a 46% increase in desired student engagement between pre-treatment and post-treatment classroom observations. (Oliver, 2018, p. 1)

Dr. Oliver's full report is included in Appendix C.

Professional Development, Coaching, and Teacher Engagement

Data Collection. Qualitative methods expanded in the third and fourth years of project implementation. The focus broadened to include the actions and pedagogy of the teachers, the coaches, and the teaching artists in the classroom. To facilitate and encourage more detailed and descriptive note taking by researchers, the NCAIP Observation Instrument was reformatted (See Appendix D.)

In addition to the 333 classroom observations focusing primarily on student engagement, 40 qualitative observations were conducted of classroom sessions with teaching artists and coaches modeling and assisting classroom teachers. These classroom observations were 30 to 45 minutes in length each. Observations of professional development sessions, monthly teacher meetings, school events, field trips, and monthly NCAIP leadership meetings and retreats were recorded with written notes and sometimes audio recorded, photographed, and/or videoed.

Formal interviews with principals (5), NCAIP leadership team (5), teachers (3) teaching artists (3), and teacher focus groups (3) were conducted, audio recorded, and transcribed. Informal conversations with teachers and the NCAIP leadership team across multiple venues were noted.

Spreadsheets containing teacher data were maintained throughout the four years. Spreadsheet content consisted of teacher prior knowledge in the arts, goals, monthly reflections, participation hours, etc. The following are six of the questions/prompts that elicited the most in-depth feedback from the teachers in their monthly reflections:

- Describe one arts lesson or strategy you implemented this month.

- Where did the arts lesson or strategy fall on the continuum?
- What was the art discipline?
- How do you think the experience went and why?
- How could this evolve over time?
- How was this lesson different from your past practice and how were the results different?

Additional documentation reviewed for the research study includes: the NCAIP website, professional development materials (draft and final program agendas, lesson plans, handouts for teachers, exit evaluations), teaching artist support materials, monthly meeting agendas, and Eureka City Schools coaching materials.

Data Analysis. An interim analysis approach was employed to organize and understand, manage and examine the four years of data (Miles and Huberman, 1994). The student engagement data for 6-8 grades, spreadsheets with the 6-8 and 3-5 teachers' information (e.g., prior knowledge in the arts, goals, monthly reflections, participation hours) and the shared Google calendar of the NCAIP Project Coordinators/coaches were among the first records formally reviewed and coded.

The first codes that emerged in the teacher reflections were: Coaching and the strategy, *See Wonder Think*. As data sources were added (interviews and observations) these program components developed into strong themes and additional codes emerged. Journals were kept in the last two years of program implementation and memos were used regularly to summarize and triangulate data.

The program components we identified as the strongest or most beneficial to teachers triangulated across the data sources: teacher written reflections, interviews and focus groups, observations in classrooms and professional development settings, and informal conversations.

Findings and Discussion

For the teachers, the program components that surfaced in the data as the most effective in advancing their skills and abilities in teaching and integrating the arts were:

- Coaching
- The Artful Thinking strategy: *See Wonder Think*
- Teaching artists
- *Focus Five*
- Development of the classroom teachers' artmaking skills

Coaching

Coaches were consistently at each school site several times a week and were open to more visits if requested or needed. Duties the coaches performed during visits included modeling a lesson or strategy, assisting a teacher with a lesson, assisting a teaching artist, observing a lesson, consulting about supplies, and checking in with principals. Coordinator Dojka identified consistent and ongoing coaching as one of the guiding principles for NCAIP's approach to professional development:

... us going out into the classroom and modeling for the teachers how to implement what they had learned (in the workshops and training sessions) . . . with the teachers observing and then letting the teachers take over and we observe and give them feedback. (NCAIP) did not develop that, that model has been around for a really long time, but we realized that it was something that we needed to spend more time doing. (personal communication, May 23, 2017)

Communicating often and following up with teachers was key. Dojka recalled one experience while working with a group of middle school teachers in the first cohort served by the grant. She was struck by "just how busy, so very busy teachers are." She emphasized that this was why it's so critical for NCAIP to "support them in a realistic way." Being realistic meant being persistent—relentless--as far as following up with teachers. Funkhouser adamantly agreed:

... "let us know if we can help" doesn't work at all. It really doesn't. . . . So we've learned that what we need to do is say, "On what day can we come in

and do this with you?" . . . "Okay, that date? Now what time of day?"
(Funkhouser, personal communication, March 14, 2017)

Communicating face-to-face with teachers—"on-the-fly"—while traveling between classrooms, delivering supplies, checking in with principals, proved to be invaluable. Coordinator Gaiera elaborates:

Getting to sites, visiting (school) sites, that's important . . . Just being on campus. Sometimes I go under the guise, oh you know, if anybody asks me . . . I was here for something else . . . But really I am just there to touch base with teachers and let them see my face and know that I am still around and still available . . . (personal communication, March 8, 2017)

Teachers responded positively to the regular presence and assistance of the coaches as the following reflections illustrate:

I loved having (*the coach*) come in to my classroom and model this strategy with students. It is such a valuable experience to see ideas modeled with children rather than just presented in a workshop. . . . (Kindergarten teacher MC, written reflection)

. . . having (*the coach*) . . . demonstrate something that I was pretty scared of doing on my own, but now that she did it with these kids I know that it is possible and I'm going to do it. (Teacher Focus Group, December 12, 2017)

Thank you again for your willingness to come in and teach these lessons with our students. I saw some of my students that would say before this project, "I'm not good at art" change their perception of themselves. (Fifth grade teacher KG, written reflection)

Thanks for having (*the coach*) come in to model the strategy again and for introducing the numbered and colored response system. (Third grade teacher UX, written reflection)

In the April, 2017 teachers' meetings, the question *How can we help you realize your goals for this year and next?* was posed to the 3rd-5th grade cohort of teachers. Over half of the responses were related to coaching. Some examples of the written responses:

- It works best when someone comes in to teach and model the lessons after we see it in PD.
- I feel like you're available.
- Keep sending e-mail reminders and visiting schools to check in.
- Keep coming by to check in.

Also recorded in the April 2017 meeting minutes:

... almost every teacher was open to a 3-visit coaching model where the NCAIP coach comes in to teach the art lesson, then later (next day, next month, next year) the coach co-teaches with the classroom teacher and finally the coach observes the teacher teaching independently.

Project Coordinator Peters pointed out that the location of the NCAIP offices, clustered in the Eureka City Schools District offices with the district instructional coaches, had been beneficial in that it had strengthened NCAIP's coaching (personal communication, September 24, 2018). Additionally, knowing what initiatives and strategic plans were in place at (ECS) sites, NCAIP was able to use information from the ECS coaching team and apply it in professional development lessons in the arts. NCAIP Project Director Kristin Sobilo, who also serves as the lead instructional coach for Eureka City Schools, has been instrumental in fostering this two-way communication between the district and NCAIP in this critical area. According to Project Coordinator Gaiera, "This has really elevated our practice ... it just has worked really well for us" (personal communication, March 8, 2017).

See Wonder Think

See Wonder Think (SWT)—one of the Artful Thinking strategies introduced and modeled in NCAIP professional development trainings—clearly resonated with teachers and their students across the K-8 grade levels. *SWT* is a thinking routine that encourages

students to make careful observations of a work of art, an image, or object and use the clues and evidence observed to come up with thoughtful interpretations. The questions posed sequentially to students as they are viewing the subject are: "What do you see? What do you wonder? What do you think?" The questions can be asked all at the same time or one question at a time with scaffolding in between.

After introducing the strategy and modeling it in workshops and trainings, coaches actively promoted the modeling of *SWT* in teachers' classrooms—in short lessons, multiple visits, integrated with different subject areas and for different lesson goals. Some teachers needed minimal coaching before they taught a lesson themselves using the strategy, but some teachers needed a more gradual process, such as: Observe a lesson, co-teach a lesson, observe again, and then solo teach. The Project Coordinators/coaches noticed early on that *SWT* was resonating with teachers:

Of all the artful thinking strategies that we have taught, it seems to be the one that is really strong at moving toward inquiry based teaching, student centered classrooms where the students are generating the questions that they want to explore which is a big shift. So not only is it useful, but it shifts teaching. . . So instead of saying "hey everybody, this is what we're gonna learn today," the teacher says "I have something interesting to show you, what would you like to find out more about?" (Funkhouser, personal communication, March 14, 2017)

The following excerpts from the teacher monthly reflections provide descriptive details on lesson content and goals, students' engagement in the lessons and the teachers' reactions to their students:

I used *See Wonder Think* strategy with the book *The Mare on the Hill*. It is a beautifully illustrated book that conveys a lot of emotion that children can relate to in the pictures. The goal of this lesson was to model looking for details, language/vocabulary development, sharing and listening to ideas, and learning to modify our ideas based on others interpretations and respectfully accept others interpretations. . . . I chose to use this type of lesson because it had been successfully

modeled in my classroom and I felt comfortable attempting on my own to see if I saw the same level of engagement. . . . The strategy of see, wonder, think made this . . . lesson have more depth. Students had a chance to share and listen to ideas to develop their own interpretations of the pictures. Giving students the time to think and develop ideas leads to a deeper level of understanding and connections to the world around them. . . . (I have used the art in the book) countless times but this was a completely different experience for my students. They were more connected, used /modeled vocabulary like ominous and frightened. The "wonder" part of the lesson I felt was very powerful for Kindergartners. To listen to others "wonder" out loud changed how some children viewed the story and their interpretation of the picture. . . (Kindergarten teacher MC, written reflection)

I first started (*SWT*) with random pieces of art. I modeled and asked students questions and allowed them to share their thoughts with a partner and the whole class. I then used it to introduce our weekly ELA anthology story. I gave them a picture from the story and had students fill out (in writing or using pictures) the see, wonder, think sheet. I then had them partner share their sheet and then we had a whole class discussion. This gave students the opportunity to think about what they see and predict what the story might be about/involve. My students really enjoyed this and a 10-minute discussion (turned) into 30 minutes because they were all engaged and wanted to share out. After many times practicing, they learned to critique others' opinions using the sentence frame "I agree/disagree with _____ because _____". It was such a rewarding experience seeing them respectfully having a discussion and sharing their opinions in a safe and non-judgmental environment. (Second grade teacher VG, written reflection)

Students worked diligently, and the thought progressions expressed were creative and impressive! I feel that modeling the activity ahead of time and choosing an interesting picture helped with the success. I did not foresee the excitement students experienced waiting to find out what the mystery picture was about. . . . This was the first time my students completed the activity 100% individually.

(Middle school teacher BC, written reflection)

Teachers reflected on why employing *SWT* to teach a lesson made such a difference in student engagement:

Today I had my students complete a *See Wonder Think* for a picture out of our social studies text about the American Revolution . . . I would consider it a success because all students participated and most seemed eager to begin reading to find out the story behind the picture. . . . In the past, I would introduce a book by reading the title, discussing the genre, and give them a purpose for reading. With *See Wonder Think* they are creating a purpose for themselves. They are invested in the story, which increased their engagement. (Fifth grade teacher KB, written reflection)

We do picture walks occasionally with new books but this art concept really made the group stop and analyze each picture which helped them really think about the story and to use their language to describe the picture. They were really into it. (Reading resource teacher UT, written reflection)

Individual student responses provided teachers access to prior knowledge, reasoning abilities, family history, interests, misconceptions and strengths that had not been known by the teacher:

I regularly use this strategy as a “*Do Now!*” activity. I have observed that students frequently connect the image either to content we have discussed in class or to their own lives. For example, we looked at an image of salmon fileted on a plate. One student commented that the bones were still in the fish. She thought this was odd because her family always removes the bones when they go fishing. We also looked at an image of people wading in the river to net salmon. A student commented that one of the people was knee deep in the river. He said that might mean that the river was a healthy place for salmon since some parts were deep and other parts were shallow. (Middle School teacher IG, written reflection)

It was quite interesting seeing what students had seen in the picture that I did not. . . . It was great seeing the different ways that each student, and myself, viewed the art presented. (Fifth grade teacher TX, written reflection)

In classroom observations in the fourth year of the program, it was noted that four of the fifteen lessons chosen by second grade teachers to be observed by an outside researcher utilized *SWT*. In one classroom of twenty-four students, the teacher used *SWT* in the first five minutes of the lesson to pique the students' interest in the main activity. The researcher found ninety-eight percent of the students to be creatively and actively engaged (levels 5 and 4) during the lesson and noted, "Lots of creative thinking in students responses" (Parker, field notes, April 4, 2018). In another second grade classroom of nineteen students, the entire lesson utilized another Artful Teaching strategy to answer the question "What is going on in the photo?" In this particular lesson, the photo was of Jane Goodall with a chimpanzee. The researcher found sixty-four percent of the students engaged at levels 5 and 4 (ninety-five percent at levels 5, 4, and 3) and noted, "Art-Science with much critical thinking! emphasis on evidence and clues". In another second grade classroom of seventeen students, the teacher facilitated a discussion with students centered around a photo of bees on a honeycomb. The researcher noted that ninety percent of students were creatively or actively engaged and that the lesson was "An amazing example of (a) *See Wonder Think*; (b) norms of group dialogue and sharing . . . Exemplar of group collaboration" A student comment noted by the researcher during the Share out/Show tell section of the lesson: "I wonder if the bees are getting ready to feed their babies" (Parker, field notes, April 4, 2018).

Providing situations where careful observations and thoughtful interpretations are encouraged and where thinking is visible, fosters an alertness and openness in students to opportunities that call for thinking and positive attitudes toward thinking and learning. When these thinking routines are employed regularly students are able to exercise their metacognitive skills, "to think about their thinking" (<http://www.visiblethinkingpz.org>). And in his thesis on developing intellectual character, Dr. Ron Ritchart at Project Zero argues:

Thinking routines act as a major enculturating force by communicating expectations for thinking as well as providing students the tools they need to engage in that thinking. Thinking routines help students answer questions they have: How are ideas discussed and explored within this class? How are ideas, thinking, and learning managed and documented here? How do we find out new things and come to know in this class? As educators, we need to uncover the various thinking routines that will support students as they go about this kind of intellectual work or enact new ones if such routines are not readily present in our practice. (Ritchart, 2002, p. 113-114)

Teaching Artists

In group discussions at teacher meetings, during classroom observations, side conversations, and in written reflections, teachers voiced why they believed teaching artists in the classroom to be a critical program component. The reasons varied and were not confined to the development of skills in an art form or teaching strategy. Note the following example:

Amy Tetzlaff (theater artist) came to my class twice to help kick off the Acting Right curriculum. The fact that she was scheduled to work in my classroom gave the push I needed to figure and practice the logistics of creating an open space in the classroom with my students. Between visits we practiced the nonverbal contract and using the observation deck. My students were very engaged. Despite some initial silliness, most were totally on board and had a lot of really positive things to share about how they felt when they were centered, relaxed, and focused. Next time I would end the first session with Amy a little sooner so that we could end with a successful challenge. We did this on her second visit and it went better. . . . This was a new curriculum and a new approach to introducing acting and group cooperation for me. I was a little afraid of trying it on my own. . . . In the past I would have just reminded students what I needed of them as learners during theater versus taking the time to teach and practice focus, cooperation, and body control as valuable

skills which we practice and strengthen throughout our lives. (Fourth grade teacher, BD, written reflection)

In the December 2017 teacher focus groups, the classroom teachers identified teaching artists as “hands down . . . one of the most beneficial” of the NCAIP professional development components:

. . . because even when you have all these cool things, when you go back (to the classroom) it is not always the easiest thing to implement or you get so many great ideas that you are lost in it. So you kind of have to focus on something and implement that and then add something else, but when somebody else comes and helps you set that in place it really, that was really helpful. (ECS teacher focus group, December 12, 2017)

I love teaching artists. If we had a set teaching artist that came for three weeks. . . . Something where the artist is set. So there's not so much planning. (KTJSD teacher focus group, December 14, 2017)

In the monthly reflections some teachers wrote rich, descriptive paragraphs about the teaching artists' lessons and pedagogy. Note the following by a sixth grade teacher:

Paul (storyteller) opened by sharing a Shel Silverstein poem with students, this immediately drew students into his lesson. During the first presentation Paul focused on his rate, pitch, volume, and use of body. Immediately after he told the students he was going to share the same poem in a different way and delivered the story monotone with low affect. Paul and I then asked the students to point out the differences between the poem being told in two different ways. . . . The second part of the lesson students got several lines of the poem and worked with a partner to find a collaborative way to present the lines focusing on their rate, pitch, volume, and body language. . . . After students practiced their poem lines with their partner they presented to the whole class. I was pleasantly surprised that both classes had

the composure to do this activity with minimal distractions. . . . Paul Woodland has continued to be so wonderful to work with. The students feel comfortable to ask him questions and are beginning to share with him the stories they are now writing for this project. (BT, written reflection)

NCAIP Project Coordinator Sarah Peters explained that her vantage point as a coach in the classroom, while assisting the teaching artist, was “special” in that it allowed her to “observe the (classroom) teachers watching the kids.” It was not unusual for the teachers to be “surprised” by their students’ willingness to engage in learning that was totally outside their comfort zones (personal communication, September 24, 2018). The students’ reactions and responses to the artist and the artist’s teaching methods and lesson content was quite moving for some of the teachers. For example:

Under Dan's (poet) guidance, students created poetry they felt proud to own; some students surprised me and themselves with their use of imagery to express feelings. One tough little guy continues to write vivid poems in his spare time. . . . You never know who you'll touch (Fourth grade teacher TE, written reflection)

The NCAIP teachers’ responses to the teaching artist residencies mapped on to current arts education literature that views the teaching artist as a coach, rather than a special guest in the classroom. According to the Kennedy Center, artist residencies can be more than just a “breather” for the classroom teacher if the teaching artist is introduced and partnered with as a technical coach. The teaching behaviors and strategies modeled by the artist can boost learning and transform interpersonal dynamics if connections are discovered across the curriculum by the classroom teacher (Kennedy, 1998).

Focus Five

While serving as an NCAIP Project Coordinator, Dojka was also working for Turnaround Arts as a Regional Coach. Turnaround Arts is a national program of the John F. Kennedy Center for the Performing Arts. It was founded in 2011 by the President’s Committee on the Arts and Humanities under the leadership of former First Lady Michelle

Obama. The program is based on the premise that high-quality and integrated arts education can strengthen school reform efforts, boost academic achievement and increase student engagement in schools facing some of the toughest educational challenges in the country. One of the NCAIP participating schools, Hoopa Elementary in the Klamath Trinity Joint Unified School District, was also a Turnaround Arts School 2016-18.

Dojka explained that through this association with Turnaround Arts, NCAIP was introduced to a theater-based program called *Focus Five* (personal communication, May 23, 2017). At the core of *Focus Five* is the belief and understanding that the desired approach to teaching is active, social, and cooperative, but to actualize and maintain this type of learning in a classroom filled with students is truly challenging. *Focus Five* uses foundational elements of theater to structure an effective classroom management approach that empowers students to take ownership of and be responsible for their own behavior. (<http://www.artsintegrationconsulting.com/>).

With NCAIP coaching assistance and a local two-day training, organized and offered by the Humboldt County Office of Education, teachers moved gradually into teaching the *Focus Five* strategies on their own and integrated them across the curriculum. The Actor's Toolbox, Concentration Circle, Cooperation Challenge, and Tableau are *Focus Five* strategies highlighted in the following teacher reflections:

The strategy I used, which turned into a lesson, was "The Concentration Game." It started as freezing when the recess whistle blew, then went to "The Concentration Game," then became "The Mannequin Challenge," and is currently used as tableau to show understanding of a passage in our read aloud. I chose this mostly because it is fun and also because some of my students (if not all) could benefit from exercising control over their bodies. . . . My students were very successful and had fun during these tasks. The popularity of "The Mannequin Challenge" had them at a high level of engagement. The read aloud content was easily accessed and short enough to not overwhelm them with options or confusion of plot events. . . . I would like to take this into other domains; science, in particular. I would also like to add pantomime to the routine. (Fifth grade teacher NM, written reflection)

I used the Actor's Toolbox to begin our puppet show sessions. Each week a group of kindergarteners are chosen as puppeteers to put on a show for the rest of the class. The goal is to remind them that they are in control of their bodies and voices . . . The experience works well. Students are able to make a kinesthetic agreement for self regulation. This helps to create a successful puppet show. They are able to practice the elements of a story through a performance. . . . I have done puppet shows with students, yet this adds an even bigger responsibility. It helps students to learn how to self-regulate when feelings of nervousness or silliness start to arise. I think taking this to use during transitions times, or at the start of the day would also be useful for this age group. (Kindergarten teacher UU, written reflection)

My class struggles to focus and be in control. They responded wonderfully to the strategies! We regularly use the actor's toolbox, concentration circles, and cooperation challenges, and 1 min. Tableau challenges in our classroom. My students love being empowered to be in control of themselves. I love all the positive language and the involvement of their whole body. Using their bodies to express themselves helps students understand abstract ideas. I love this strategy. . . . I can't wait to implement this at the beginning of next year and work through skills all year long. (First grade teacher BN, written reflection)

Teachers took risks in integrating the strategies. Laying out and teaching the process was not simple, especially in the primary grades, but the efforts were rewarding:

This year, I've implemented tableaux on a weekly basis. I've integrated it into my ELA lessons. I use the picture retelling cards (from our adopted curriculum) to allow students to work in small groups and use their bodies to create a tableau of the story we read that week. Doing this, is another way to reinforce beginning, middle and end story retelling. . . . and of course a big hit with my students. They look forward to "Tableau Thursday." . . . When we first started a few months back, there was a lot of arguing within groups and some confusion. But I didn't give up! With practice my students were better able to understand tableaux and were really

looking forward to them every Thursday. Sometimes there (are) still arguments over who gets to be what in the picture, but they are better at working through their disagreements with my help/assistance. They know if they can't work it out then they will have to sit out...which none of them wants to do! This "forces" them to work together and compromise. I can't wait to do these again with next year's class! (Second grade teacher VG, written reflection)

It took us a while to go through the whole process (almost two months) until we could be successful . . . this is pretty typical in the primary grades. . . This wasn't all that different from the way I have taught grouping before. The vocabulary was slightly different, but I really like the idea of students being "strong." I think that makes them even more aware of their actions. . . . This has become a routine during our morning circles. (First grade teacher NT, written reflection)

Note in the above reflections, some of the teachers discussed using the *Focus Five* strategies in other subject areas and "next year." The following detailed reflection written by a middle school science teacher discusses using the strategy to explore a scientific process. Note how the act of reflection sparks lesson ideas for the future:

This month I tried out Tableau Pantomime Tableau for the first time with my science students. The first goal of the lesson was for students to learn about T-P-T, so we spent about 15 minutes developing language and practicing using our bodies to make both moving and frozen pictures to demonstrate different emotions, stories. The other goal was for students to use T-P-T to develop a better understanding of the process of heat transfer through a lava lamp. I decided to try T-P-T because my students were struggling with this very challenging concept, and I wondered whether having them use their bodies to create a physical representation of the process would help them more fully understand how heat moves. . . . (Sixth grade teacher CF, written reflection)

This last reflection will be revisited in more depth in the final discussion/conclusion when "Teacher written reflections" are specifically addressed as a program component.

Development of Teachers' Artmaking Skills

The NCAIP team came to the agreement about halfway during project implementation that the classroom teachers needed more opportunities to develop and strengthen their artmaking skills. The studio time in the meetings, workshops and intensives was just not enough for most of the teachers to build their confidence to teach foundational art skills to their students. Project Coordinator Dojka discussed the critical importance of building teachers' "comfort level" so they can teach the arts, "We want them working with mediums, art mediums, or moving their bodies and dancing. Whatever that is and just feeling more and more comfortable" (personal communication, May 23, 2017). Dojka explained that a solution for adding studio time for teachers crystallized "sort of by accident":

I was the teaching artist for the California landscape project for third grade and I knew the teachers were really interested in the project . . . they wanted to continue it, but I could tell that there was some hesitation. . . . The main issue was that they just didn't feel comfortable blending, tinting and shading paint. Even though they had had the training at the summer institute, it wasn't enough for them. They needed to feel more secure so I said that's no problem, I am happy to come back. But they were still not that enthusiastic. . . . Then I said, what if we do it at my house? . . . and they said Yes! Enthusiastically! . . . so we did an informal workshop at my house and we had food, we talked, I demonstrated tints and shades, they painted, we talked . . . (personal communication, May 23, 2017).

This informal workshop was followed by another optional skill building session for teachers at Project Coordinator Gaiera's home. The responses of the teachers to these sessions were so positive that the coordinators decided to explore how the teaching artists' role could be expanded to meet this need. Piloting that idea, NCAIP hired a local visual artist to host seven teachers in her studio for a day of painting and drawing. The local artist was a credentialed teacher as well "so she was able to address the history of art and also the integration piece and just work with the teachers" (Dojka, personal communication, May 23, 2017).

In answering the questions “What has been rewarding for you?” and “How can we help you realize your goals?” posed to the third through fifth grade cohort of teachers in the April 2017 monthly meetings, the following responses echoed throughout the group:

- Learning to do art personally.
- I loved being taught the art skills so I could feel better about doing it in my class.
- Continue to provide artmaking opportunities for teachers to increase comfort level perhaps in a social setting.

Organizing different venues for studio time was beneficial in that it offered a range of opportunities for the teachers to broaden and deepen their artmaking skills. It also expanded the ways in which teaching artists in the community can work with classroom teachers. By structuring the program component as attendance optional, with food and drinks (paid for with non-grant funds), and in a non-school setting scheduled in the evenings or on weekends, it opened up an opportunity for teachers to connect with other teachers across the two rural districts, develop their skills, and make art.

A field trip and a lesson observation

To date, 2,365 students have experienced a performance at their school, 1,200 students have attended a performing arts field trip, and 400+ students have attended the Goudi'ni Gallery at Humboldt State University through NCAIP. In order to more effectively communicate the multi-layered learning experiences of the classroom teachers and their students, a case study approach was employed for this particular section. Excerpts from teacher interviews, observation field briefs, photos of the students at work in the classroom and their finished artwork were used to compose the following two mini-cases.

A field trip to see George Blake

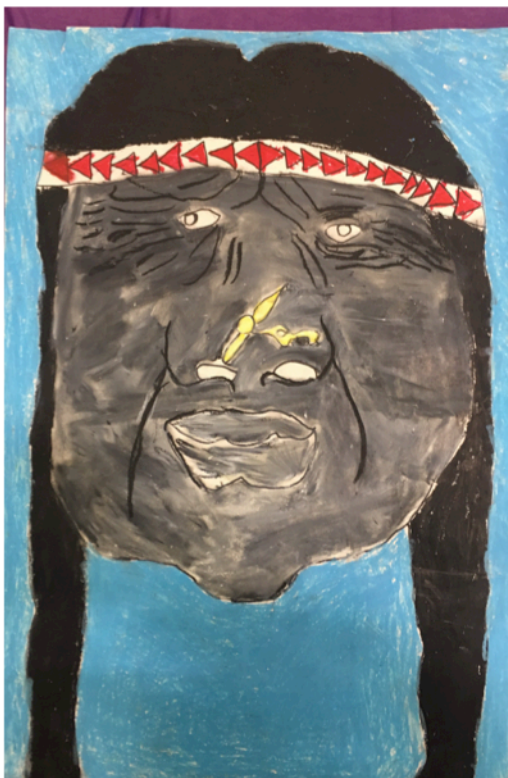
Field trips were extremely popular with the NCAIP teachers and even more so with their students. NCAIP, in partnership with Humboldt State University's Art Department, Center Arts, and Arcata Playhouse organized over thirty field trips a year to visual art galleries and performing arts productions over the four years of the project. Planning and facilitating field trips for hundreds of K-8 students from multiple schools was no small task. On top of the buses, lunches, chaperones, and docents to oversee, the Klamath Trinity students had to be transported sixty rural miles to and from Humboldt State University for the events.

Go To! A Handbook for K-8 Arts and Culture Field Trips, written and illustrated by James Woglom, Mimi Dojka, and Haley Davis is presently in production. The context for the field guide is one of the NCAIP field trips: George "Portie" Blake's exhibition at the Goudi'ni Gallery on HSU's campus, December 2016. Mr. Blake is a Hupa Yurok artist recognized internationally for his sculpture, jewelry, regalia, contemporary works and the traditional art of dugout canoe.



Hoopa Valley Elementary student artwork inspired by the field trip to view George Blake's work at HSU's Goudi'ni Gallery. (18" X 24" oil pastels)

Hoopa Valley Elementary student artwork inspired by the field trip to view George Blake's work at HSU's Goudi'ni Gallery. (18" X 24" oil pastels)



Mr. Blake was named a National Heritage Fellow by the National Endowment of the Arts in 1991 and in 2016, shortly before the Goudi'ni exhibit, he was awarded an honorary doctorate by Humboldt State University.

This particular field trip to view Mr. Blake's work at the Goudi'ni Gallery held special meaning for the Klamath Trinity students because George Blake is known by them, not only as a famous artist, but also as a community member and a family member. In an interview, Hoopa Valley Elementary fourth grade teacher QN, who is Yurok-Hupa and has taught at the school for twenty-one years, unpacked the familial bonds and cultural significance that George "Portie" Blake and his art embody:

I've had the privilege to know Portie for all my life. He has been a part of our community and family and you know, I guess oddly enough I've always been in awe of what Portie's, Mr. Blake's been able to create. I guess I must say, I've taken it for granted because I've known him so close . . . I've always appreciated his excellence in . . . anything the man touched. Thinking back to my younger times around him, seeing some of his things at his studio that he would discard for his own artistic eye and I can remember thinking to myself I wish I could be that good at what he has discarded! That caliber of what he has. Thinking like that, even in the earlier stages of my life, around Portie, was one thing... But I think the one that really I guess really drove it home was when he was recognized in the Smithsonian with BB King . . . it didn't register until that happened. . . . As you grow up around the guy . . . you know he is phenomenal and his assistance in our cultural activities as well, the bulb maker that he is, the regalia man that he is, everything that he has done, everything that he has touched is awe. But when he was recognized with BB King that really opened my eyes a little bit more about how great and accomplished he is because we all know Mr. King is unbelievable in his own right. And for Portie to stand shoulder to shoulder with him on that day and be inducted was I guess it was just meant to be. It makes sense. Because Portie is that good, period. He deserved to sit with someone as great as BB King because he in himself has reached that... and he is too! He is a very humble man. I always try to drive it into these students that we take things for granted, someone like Portie . . . Uncle Portie, Cousin Portie, Grandpa Portie, or whatever . . . to the children here. We take it for granted . . . the greatness that you get to be around, not very many people can be around someone like that. (QN, personal communication, June 15, 2017)



Hoopa Valley Elementary student artworks inspired by the field trip to view George Blake's work at HSU's Goudi'ni Gallery. (18" X 24" oil pastels)

Teacher QN elaborated further on the impact on the students of seeing Mr. Blake's art in a professional gallery setting:

And the significance . . . when they see the local people . . . I don't know any other way to say it, but to be recognized at that status . . . it's a positive role model significance. It's that . . . x factor . . . "I can do this because my cousin has done this!" or "I can do this, my uncle has done this!" "I can push myself, or I can be a part of it." If it is not in art, it is in something else. . . You can see the beaming pride when they can say that was Grandpa Portie . . . (personal communication, June 15, 2017)



George Blake discusses his art with Klamath-Trinity students at the Goudi'ni Gallery on the campus of Humboldt State University (*Humboldt State University NOW*, December 9, 2016).

As our field trip interview came to a close, QN reflected on his overall experience as a participating teacher in NCAIP:

... you wouldn't see me trying to teach or coach a sport I don't know anything about. .. And I felt that way about a lot of art mediums before the last few years ... these programs definitely encouraged me to take risks. ... It's silly to say, I should have known right off the bat that it's okay to be a student with your students because that's what you are and that is what learning is. To feel that you have to be the instructor, to know all, to truly be the master, to teach the apprentice how to do things ... No! For me, art, I am right there with you! I'm going to learn right there with you. I am in awe of what and how things are happening, too. So this program has helped me remember that it's okay to be a student, even amongst your students. When I go to these little workshops that we've had ... you're in a room with colleagues (who are strong or not so strong artistically) and they're all students with you in that workshop. It's what you have to take back into your classroom, too. ... It's strengthened my ... confidence of understanding art, of delivering art, practicing art. I think that's the key. Practicing art. Because that's all everybody is going to do every day. And I would bet George Blake says that he practices art. Even though I would disagree with his comment because I think he is a darn master ... (personal communication, June 15, 2017)

A lesson observation

In Spring of 2018, KC, a sixth grade Eureka City Schools language arts teacher, was observed teaching a three-week unit that combined personal narrative and mask making. KC first taught the lesson in 2016 with hands-on NCAIP coaching assistance and the technical assistance of teaching artist James Nord (sculptor.) KC, who had been teaching for eight years at the start of his NCAIP experience, described himself as a “complete novice” as far as his knowledge in the arts and in teaching the arts and explained that his positive experience of planning and teaching the unit the first year (2016) with the coaches was responsible for him incorporating the unit in his Spring 2017 and 2018 semesters. KC recalls how the lesson developed:

(A history teacher in the same school) and I had an idea about making masks and connecting that to personal narratives. Then we planned it out a bit and then Bill and Heather came in and really polished it up. They were really available to help with planning . . . with anything. Bill prepared a slide presentation. Got the materials. . . . He took an idea that we had that would have worked out fine, but he made it high quality. So, the first time I actually tried the lesson Bill and Heather were around . . . checking in . . . were there to assist. Anything. . . materials . . . ideas. The next year, I taught the lesson myself. (personal communication, June 11, 2018)

The field brief that follows was compiled from field notes and photographs taken during a planned observation of the sixth grade personal narrative unit. The entire unit was taught to three sixth grade classes during their regular language arts periods (first period, fifth and sixth periods of the day) in their regular classroom between May 22 – June 11, 2018. Class periods were 53 minutes long, except for early release days on Mondays which shortened each class period by eleven minutes. The unit incorporated visual art into the language arts unit as way of broadening students’ concept of the personal narrative.

The first week and a half of the unit focused on the writing of the personal narrative and developing/strengthening the students understanding and use of

symbolism in words and visual art. Students were instructed to center their written narratives on a specific event that held great meaning for them and that they believed defined who they were or wanted to be.

The second half of the unit focused on the mask making. The purpose of this part of the unit was not to reproduce visually what had been written about in the narrative, but to “go deeper” and create a representation of the whole person. Each side of the mask had a theme: (1) The outside of the mask was a symbolic representation of the “public face” of the student, that which the outside world was most familiar; and, (2) the inside of the mask was a symbolic representation of the student as they believed themselves to be, which could be totally unknown to the family, friends or the general public.

The unit was eagerly anticipated by a majority of the sixth graders because students who participated in years past had spread the word around the school. In an open-ended interview conducted after completing the mask lesson, KC reflected on his third attempt at teaching the unit:

I felt good this year. I've gotten better at anticipating problems . . . I'm more comfortable. Next year I want to think more about the end . . . how kids can share the papers and the masks in a way where they feel open about discussing and sharing with each other. Cause I was kind of disappointed that they didn't do a better job of this. In years past, the discussion has been pretty good. This year I feel a couple of the periods didn't do a good job at all with this. . . . I've been turning it over in my head . . . perhaps more preparation by me is a part of it and also waiting until the last weeks of the year has something to do with it . . . the kids are wound up and have a hard time focusing. I also think I need to know, learn . . . understand how to tie in the art standards. There's a lot to think about . . . (KC, personal communication, June 18, 2018)

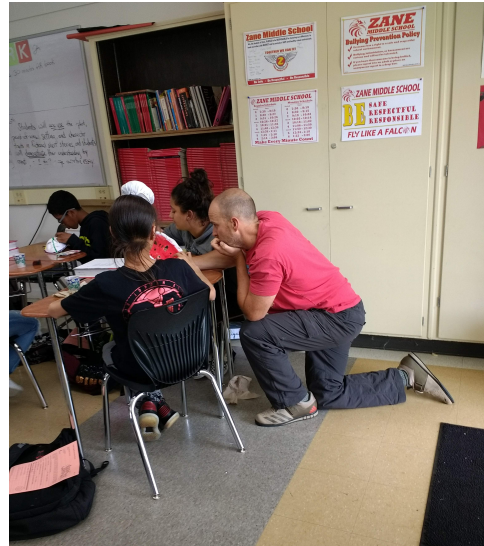
The field brief that follows is excerpted from the artmaking portion of the unit.

June 4, 9:25 am
2ND PERIOD CLASS, 19 students

Class in progress

Paint station set up at table located near door to the outside. KC is in charge of distributing paint, brushes, palettes from station. I take over that duty so that he can circulate and monitor/assist students

Students get their supplies and then work at their desks which have been moved together in clumps



Students replenish their cups with clean water at water fountains outside.

Students practice drawing and painting their designs on paper plates.

Students are given their blank mask template to complete their final work after they've completed a prototype on the paper plate.



June 5, 9:25 am 2ND PERIOD CLASS, 17 students

I bring hot glue gun and glue, and an assortment of trinkets for students to collage on to masks. KC designates an area for hot glue needs

9:31 All students have their paints and are on task

9:50 Student who usually is not working is now working diligently

Music is playing low in the background

KC is circulating. Has set up papier mache station in front of classroom (3 desks pushed together)

Lots of chatter, but everyone is working.



KC says (to the whole group): "Why are you using those colors? What is the symbolism of the colors you are using?"

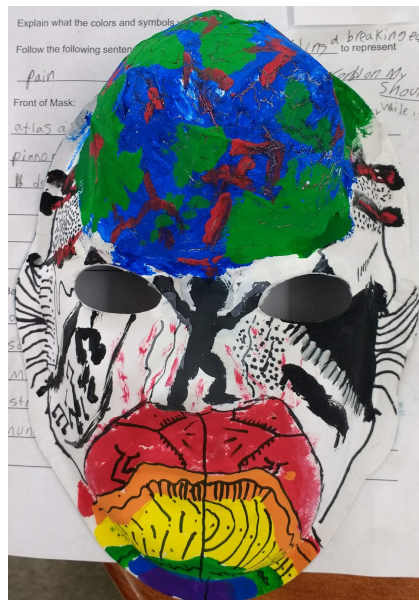
10:05 KC: "About 15 minutes left, guys and girls!"

10:10 One of the students, looking at her mask, talking to herself while working: *I am very proud of this . . .*

10:12 KC: "About 5 minutes!"

Some students continue to work on their masks and some begin to clean-up loudly.

10:23 KC (to whole group): "Gallery walk next Monday"



JUNE 5, 2:15 pm, 6TH PERIOD CLASS, 27 students

Students enter with a vengeance (appear determined!)

This class is taking more risks as far as design.

I assist one student with constructing a papier mache globe which will be attached to the forehead of his mask. We find masking tape and gesso. He doesn't need my help after that.

I am carrying the world on my shoulders while it is dying...
(Excerpt from student worksheet description of mask on left. This is the outside of the student's mask. The inside of his mask is not displayed.)



JUNE 7, 9:26 am, 2ND PERIOD CLASS, 23 students

9:40 Paints have been distributed. Most students are working on their masks. Lots of chatter.

Today this class will stay through second period. More students are here because some have come from other classrooms in order to finish their masks.

KC's worksheet is circulating "I chose _____ to represent _____ because _____"

Separate written descriptions are required for (1) outside of mask and (2) inside of mask.

23 students (13 girls and 10 boys) are now in class. Numbers fluctuate as students enter and exit other classes

1:12 pm 5TH PERIOD CLASS

KC: "This is the last period you have to work on your mask. You need to fill out a worksheet that explains the meaning behind your choice of colors and symbols. This needs to be done for the outside and inside of your mask. If you don't explain your symbols and colors and design you won't get a grade."

1:30 KC: "We're about 40 minutes away from when you have to be done"

Students are using various painting techniques (splatter ala Jackson Pollock); sponging, layering, pastiche

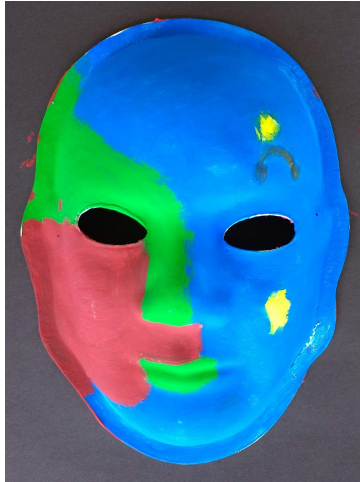
KC (To the student who is creating the mask shown on the right): You need to tell me what the symbolism is. You need to write it down . . . "

1:40 Everyone seems to be talking, but focused on their own task

2:10 KC: You need to leave! If you want to stay here for sixth period, go to your sixth period class and get permission to come back.

Next class (sixth period) is packed with additional students





Top left photo: Outside of mask (portraying that part of one's persona that is visible to others.)

Blue represents peace cause it's the same color as the sky cause the sky is peace for me. I put some yellow stars cause they represent peace for me, too. And the headphones . . . that represents when I listen to music or watch a video I get relaxed. The green and red colors represent who I am cause I'm Mexican (Written student description).



Bottom left photo: Inside of the mask above (portraying that part of one's persona that is known only to oneself.)

This represents when I get angry. The blue volts are like lightning. For me, lightning represents anger (Written student description).

JUNE 11, 9:15 am, 2ND PERIOD CLASS

KC has arranged the desks in a circle in the classroom. Individual masks are placed on desks, each on top of the sheet explaining the symbolism of the mask. The text is obscured by the mask.

9:19 Students arrive (KC has a bad cold. Voice is scratchy and he's congested.)

KC: Daily/weekly check-in and then preps students for gallery walk. "Really good job on the masks. We are going to spend some time today looking at them, and talking about the work."

9:30 KC explains Gallery Walk rules. Tells students that they don't have to share their writing with other students. Two students request to remove their descriptive papers (meaning of masks) and do so. Students begin circulating and looking at masks at 9:37

9:47 Students continue quietly going from desk to desk looking at the masks. They pick them up, look at both sides, read the paper (if it is included.) The room is fairly quiet.

9:48 Take a couple more minutes then take a seat.

9:50 All students in seats and are now writing their thoughts about the masks they've viewed.

10:00 Students choose to write rather than verbalize their thoughts.



Top left photo: Outside of mask (portraying that part of one's persona that is visible to others.)

There's a sun, flower, closed eyes, music, yellow and a smile. I used the sun and smile cause people think I'm happy and sunny and stuff when they first meet me. I have the music there because music is my passion and I think it's one of the things people think about when they think of me (Written student description).



Photo left: Inside of above mask (portraying that part of one's persona that is known only to oneself.)

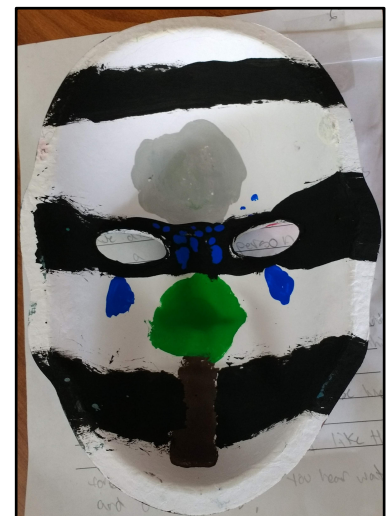
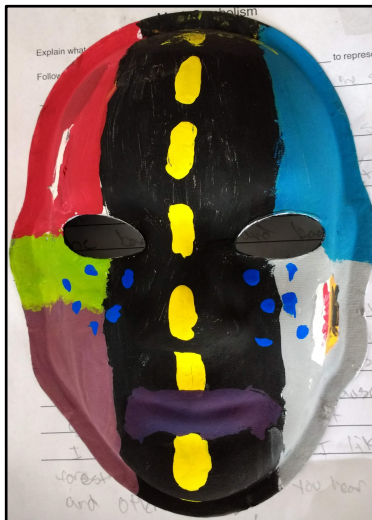
I have a rain cloud, rainbows and galaxy because I've been feeling down . . . I'm part of the LGBT+ community and a galaxy that represents space or being lost. I get lost in my thoughts a lot and I just thought it worked perfectly on the inside (Written student description).

Photo near right: Outside of mask

I have a road because I travel and do lots of things. I have different colors to represent I am a loud person. I have a basketball and a baseball to show that people see me as a sports kid (Written student description).

Photo far right: Inside of same mask

I have black and white stripes to show I've done bad things . . . I have tears because I am sad at home because I get in fights and stuff. I have a tree because I like the forest . . . how its quiet and you hear water birds and other animals (Written student description).



Final Discussion and What's Next?

The NCAIP summer and spring institutes generated interest and enthusiasm in learning to teach the arts and include the arts in one's classroom curriculum, but it was coaching that actually furthered the development of skills and knowledge and insured their application by teachers later on in their classrooms. In addition to being a discrete program component, coaching was also found to be a critical sub-theme underlying and connecting other NCAIP program components, as well as an effective, robust communication network between the Project Coordinators and teachers. For example, consistently offering ongoing coaching in *SWT* and *Focus Five* strategies played a major role in teachers developing their skills and becoming more comfortable with those strategies. In the Teaching Artist Residencies, the artist worked alongside the teacher in the classroom as a technical coach in the art discipline and the Project Coordinator/coach assisted and supported the artist while focusing on teaching behaviors that were more broadly applicable and closely aligned with the classroom curriculum and pedagogy (Kennedy, 1998). In the Development of Teachers' Artmaking Skills, the coaches were on the frontlines of identifying disciplines, venues, and learning opportunities for teachers, as well as organizing, conducting and/or hosting some of the workshops.

NCAIP's emphasis on coaching was grounded in experiential arts education research that finds effective instructional coaching to be key in moving classroom teachers toward a deeper acquisition of knowledge in teaching and integrating the arts (Joyce & Showers, 1995; Jacobs, Goldberg, & Bennett 2004). In an evaluation of the Wolf Trap AEMDD grant project (2010) researchers reported that when arts strategies and activities were integrated into the teaching of mathematics in prekindergarten and kindergarten classrooms, teachers who were coached to use the strategies were better able to apply those strategies independently in their classrooms, and their students performed better than their peers on mathematics tasks consistent with their grade-level standards. Eighty teachers were followed over two years, (48 treatment and 32 control) in total.

In another study evaluating the Developing Reading Education through Arts Methods (DREAM) program, two approaches to teacher professional development in arts

integration—a summer institute model and a model combining the summer institute with instructional coaching—were investigated (Saraniero, Goldberg and Hall, 2014). In an experimental design, the intervention trained third and fourth grade teachers to integrate visual arts and theater into the reading curriculum. Over fifty teachers a year from ten school districts, ranging from rural communities to mid-sized cities, received approximately 30 hours of professional development in arts integration. Findings suggest that coaching plus institute intervention had a greater impact on the teachers' confidence, use and frequency of arts integration than the institute-only participants or on the comparison group (Saraniero, Goldberg and Hall).

As far as cementing an effective communication channel between the teachers and the Project Coordinators, the frequency of coaching visits provided the NCAIP Project Coordinators with first hand knowledge of what was working in the classroom, and what needed tweaking, shaping or eliminating. In addition, the visibility of coaches at school sites facilitated an environment of trust among the coordinators and the teachers. Teachers became more comfortable with and appreciative of being observed and mentored as time went on. Project Coordinator Gaiera provided a glimpse into this window in her interview:

I've been doing *See Wonder Think* in the classrooms and I . . . have the follow-up conversations with teachers . . . I try not to ambush them, I just try (to) establish relationships with them . . . there is trust there. Also they're talking to each other and saying "oh yea yea, have Heather come (model) that . . . it'll be good." (Personal communication, March 8, 2017)

Teacher reflections

As mentioned in the methods section, the written teacher reflections compiled during the four years of the project provided a rich window into the teachers' experience in the program. A set number of written reflections were required to be submitted online by teachers to the Project Coordinators/coaches. The number of reflections submitted affected extended education course credits and the amount of teacher stipends. There were plenty of entries where teachers responded minimally just to meet the requirements for credit,

but there were also many entries with rich descriptions of planning, thinking, processing, and/or projecting into “next year.”

NCAIP Project Coordinators Funkhouser and Gaiera were responsible for entering the teacher responses into excel sheets and with reading and responding to the teachers' monthly entries. Coordinator Gaiera explains why she came to believe that the reflections were critically important to the teachers' development:

The monthly reflections that they submit . . . they get to reflect on their practice . . . what arts experience have you done with your students or what arts experience have your students had, how did it go? How is it different than how you've taught this in the past? What would you do differently? These series of questions . . . it gives us an opportunity . . . It is really interesting to have teachers do the reflection(s) because they talk themselves into “oh, now I see that I would do this again, but not this part.” And that is a really valuable piece. . . . I think it helps to ensure further implementation when they take time to think about it. What worked well or how could they do it differently -- frequently we don't take the time to do that when we are teaching. So that's a valuable piece that we ask them to do. Some of them might not love it, but I think it is good. It also allows us to respond and give them either recognition or kudos or direct feedback, specific feedback. You know, strength based feedback. . . like “wow, you're really taking risks here or oh I can see you really tried something different or out of your comfort zone” . . .that's how we grow. Giving them encouragement, but also suggestions.

The following excerpt is a rich example of a sixth grade science teacher's reflection after using *Focus Five* strategies. The Project Coordinator's responses follow the teacher's entries which are included as another example of the coaching in NCAIP:

Prompt: Describe one arts lesson or strategy you implemented this month.

Classroom Teacher CF: This month I tried out Tableau Pantomime Tableau for the first time with my science students. The first goal of the lesson was for students to learn about T-P-T, so we spent about 15 minutes developing language and

practicing using our bodies to make both moving and frozen pictures to demonstrate different emotions, stories. The other goal was for students to use T-P-T to develop a better understanding of the process of heat transfer through a lava lamp. I decided to try T-P-T because my students were struggling with this very challenging concept, and I wondered whether having them use their bodies to create a physical representation of the process would help them more fully understand how heat moves.

Project Coordinator Funkhouser's response: Great! Ambitious start.

Scientific clarification (and I might be wrong) but heat doesn't move, does it? Heat is an energy source and hot materials travel through cooler materials, right? I remember my dad (a scientist) always corrected me when I said "Heat rises", "Actually son, hot air rises but heat doesn't."

Prompt: Where did the arts lesson or strategy fall on the continuum?

CF: INTEGRATION-students demonstrate their understanding of core content through an art form AND they are trained in new standards based art skills.

Project Coordinator response: Wow! Integration before development lessons are rare (need to learn to dance before we can dance to learn) ...tell me more!

Prompt: What was the art discipline?

CF: Theater

Prompt: What was the core discipline?

CF: Science

Prompt: How do you think the experience went and why?

CF: The experience went well, actually. The kids said it was really helpful having to act it out because it made them really think about how the process works. I think the success was taking the time to practice with more simple actions first before trying it with the complex concept of heat transfer.

Project Coordinator response: Always important to scaffold. They need to learn how this type of learning happens before they can tackle more challenging topics.

Prompt: How was this lesson different from your past practice and how were the results different?

CF: I've never had my kids act out scientific processes before. Normally they read about concepts, design and conduct experiments, do interviews, build and test models, and do lots of writing. They are generally working on multiple concepts at once that are all linked together. With T-P-T we were able to isolate a particularly abstract concept and spend some time focusing on it while learning and trying out some new skills that used very different parts of their brains. I would say more students were able to demonstrate understanding of heat transfer after learning and then using T-P-T than students who don't have the opportunity to use physical theater to learn the same concept.

Project Coordinator response: Movement and processes/cycles are such a natural connection. I'm glad you embraced that. Research shows knowledge is stored in two forms: linguistic and nonlinguistic (representing knowledge in a form other than words – visually, kinesthetically, smells, tastes, etc.). The more students use both forms in the classroom, the more opportunity they have to achieve. (Effect Size 0.75 according to John Hattie)

Prompt: How could this evolve over time?

CF: I have not used T-P-T since, but now that I am reflecting I think I would like to make it a more regular strategy in my class. Especially for super abstract concepts.

Yes, it can be taken further. I'm thinking of also providing it as an option for students instead of writing answers on a quiz. . . . More planning is required for this.

Project Coordinator response: Of course. You didn't come to Acting Right training, did you? That would have been perfect for you. Several other [of your colleagues] did and could tell you about it (and maybe let you copy their scripts). By making the actors toolbox, collaboration and tableau a regular part of your instruction, students will get more comfortable with it and it will just add to how they learn science deeply. Acting Right will be offered again in June at HCOE [Humboldt County Office of Education] and I think you would get a lot from attending as well as reading the handout that was provided. Again, ask [your colleagues] . . . they were all there.

This level of detail in the written reflections was not required, but the structural component encouraging it was in place. Teachers did not respond in depth consistently every month, but because written reflections were a requirement, the opportunity was there to discuss a lesson that piqued their interest or to recall a particular moment with their students. Thinking back on their lessons and utilizing the prompts to tease apart what worked, what did not and why, provided teachers with the space, after a lesson was finished, to think about what happened and consider “next time.” Project Coordinator Gaiera explained that the most effective way to get teachers to journal about their practice is to provide that space “for them to talk themselves into it” (personal communication, March 8, 2017).

What's next?

As mentioned in the introduction, NCAIP was granted a No-cost Extension Year at the end of 2018 and is presently finishing up that final year. The No-cost Extension Year focuses on the K-2 and 6-8 teachers in eight school sites in the two districts and there are three levels of engagement for participating teachers: alumni support, teacher participant, and site art lead:

- Alumni of the project include teachers who are past-participants. Past NCAIP participants can request support for such things as funds to cover buses for arts-related field trips, registration costs for local arts conferences, or in-class arts strategy coaching. The intention is that these requests for support include a plan for pre-activity preparation, post-activity reflection, and a way to share the experience or activity with at least one other non-participant teacher. This invitation has been extended to approximately 45 teachers. To date we have had five teachers request support.
- Teacher participants follow the same trajectory of past years, which includes professional development, monthly meetings, one arts field trip for their class, an optional teaching artist residency, monthly reflections and in-class coaching support for the development of arts-based teaching strategies. This year there are 29 teachers participating at this level.
- Site Art Leads receive all the same opportunities and support that participant teachers receive, but they have additional responsibilities including the co-facilitation with NCAIP of one monthly on-site meeting, assisting in the planning and implementation of a school-based permanent artwork, cultivating expertise in at least one arts strategy and developing a plan, with NCAIP support, to impart these strategies at your site with at least three other non-participant teachers, and attendance at a national arts conference. There are seven teachers participating as Site Art Leads.

NCAIP is also organizing and coordinating the creation of one permanent piece of art at each of the eight NCAIP school sites during this no-cost extension year. Each artwork will incorporate student input either in the design and/or implementation. And for the area teaching artists, NCAIP is offering one professional development, hands on seminar to increase the cadre of artists who work with K-12 classroom teachers and students (Peters, written communication, March 8, 2019; Dojka, personal communication, May 16, 2019).

Moving forward in the community. Building on the NCAIP experience, the NCAIP Project Coordinators have branched out to partner with other education institutions and

districts. Two additional U.S.D.O.E. arts education grant projects have been approved and launched by Eureka City Schools and the Humboldt County Office of Education:

- Creative Learning and Access in Northern California for Innovative Education (CREATE Humboldt) will provide over one hundred hours of ongoing professional development to thirty, third through fifth grade teachers in eight schools. CLANCIE is designed to improve teachers' content knowledge in the arts and their ability to deliver high quality arts and technology-integrated instruction. Grant partners are Humboldt State University School of Education, Klamath Trinity Joint Unified School District, Arcata Elementary School District, Pacific Union Elementary School District, and the Arcata Arts Institute. The Humboldt County Office of Education is the LEA.
- Region 1 Arts and Creativity Initiative (ACI) will provide over fifty hours per year of ongoing professional development to seventy-five grade third through fifth grade teachers in seventeen rural schools. Program components include: coaching in arts integration and pedagogical best practices; and teaching artists working with teachers in the classrooms. Partners include: Del Norte, Lake and Mendocino County Offices of Education; Humboldt State University; 11 Independent School Districts; Arcata Arts Institute at Arcata High School, District 22 PTA, Ink People of the Arts, Humboldt Arts Council, California County Superintendents Educational Services Association, and the California Department of Education. (Peters, written communication, March 8, 2019)

In addition to these new federal grant opportunities, Turnaround Arts has continued its relationship with the North Coast by adopting the Humboldt County South Bay School District in to its national program. The inclusion of these Humboldt County schools in the Turnaround program, and the securing and implementation of the above federal grants, are largely due to the work and advocacy of the NCAIP team. NCAIP Project Coordinators are authors, coordinators, coaches and teaching artists of/in these programs.

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Appendix A

NCAIP participating school statistics cited in the 2014 *North coast arts integration project grant application*. United States Department of Education: Arts Education Model Development and Dissemination, p. 5.

NCAIP Participating Schools			
District	School	Number of Students	Percentage Free and Reduced Price Meals
Eureka City Schools	Alice Birney Elementary (K-5)	459	89%
	Grant Elementary (K-5)	363	77%
	Lafayette Elementary (K-5)	434	77%
	Washington Elementary (K-5)	538	44%
	Winship Middle School (6-7)*	275	56%
	Zane Middle School (6-8)	519	73%
Klamath Trinity Joint Unified School District	Hoopa Elementary (K-8)	460	97%
	Trinity Valley Elementary (K-8)	241	98%

Appendix B

Original NCAIP Observation Instrument

Teacher/I.D. _____ Grade _____ School _____ Date _____

NCAIP Observation Document/ ID #:

Time in __:__ Time out __:__ Subject/Lesson _____ Observer: ____ Co-Observer _____

Student Engagement Observation
Minimum observation time is 15 minutes — Minimum Observations = 3
 Please do not do the first observation for at least four minutes after entering the classroom.

Time of observation (5 min increments)	# of students in class	# of students per engagement level				
		5	4	3	2	1
Obs. #1 __: __						
Obs. #2 __: __						
Obs. #3 __: __						
Obs. #4 __: __						
Obs. #5 __: __						
Obs. #6 __: __						
Obs. #7 __: __						
Obs. #8 __: __						
Obs. #9 __: __						

Comments: Student created visuals ____% of all visuals in the room; Curricular student talk ____% of observation time

Classroom environment & practices			
Promotes Engagement	Promotes Collaboration	Arts	Other
Structured student talk Random calling White boards/ hand signs Active learning strategies Reflective writing/ talking St. performance/ creation Cultural diversity integrated Students choose work Wait time used well Other _____	Group or partners seating Peer review/ editing Partner problem solving Group norms defined Group norms observed Group work procedures Collab. example _____ Example _____ Example _____ Other _____	Arts integrated into other content Artist work in class Student art in class Drawing/Painting Multimedia Sculpture Dance Music Theater/ drama Other _____	Teacher moving/ checking Formative assessment Effective attention signal Concept visuals/ maps Objectives clear Clear procedures Goal setting by students Problem solving Student self assessment Other _____
Total: _____	Total: _____	Total: _____	Total: _____

Total = circles per column

Student Engagement Levels	
Level 5	Creative Student Engagement The student is actively using personal creativity, expression or choice. The student's unique needs, desires, viewpoint or history are integrated into the work.
Level 4	Active Student Engagement The student is actively doing something other than sitting. They are doing what is asked (solving, writing, graphing, etc) but not bringing personal, creative elements to the work.
Level 3	Sitting Student is sitting quietly as expected by the teacher. They may have a book or paper in their hands. They are not distracting others but not actively doing anything other than watching/ listening.
Level 2	Not engaged/Retreatism Student is disengaged from the task. Examples of this could be daydreaming, head on desk or looking elsewhere. They are not disruptive.
Level 1	Disruptive/Distracting Student refuses to do task, disrupts or distracts others.

Percent of observation time demonstrating cognition levels (*Revised Bloom's Taxonomy*)

Levels	Sample questions	Sample products	Est. % of time to nearest 5%
Creating - Putting new elements together to form a functional whole. Reorganizing elements into new structures	Can you design a...to...? Devise your own way to...? How many ways can you...? Perform or create...	Story, poem, multimedia, song, dance, visual art, theater/ drama, plan, invention, construction	____%
Evaluating - Present and defend opinions by making judgments about information, validity of ideas or quality of work based on a set of criteria	Judge the value of... Can you justify your position about...? What data supports? Provide evidence...	Debate, report, investigation, conclusion, verdict	____%
Analyzing - Breaking material into parts, determining how the parts relate to one another or to an overall structure.	How is...similar to...? What do you see as other possible outcomes? Why did...changes occur?	Survey, graph, database, chart, spreadsheet, outline	____%
Applying - Using acquired knowledge. Solve problems in new situations by applying acquired knowledge, facts, techniques and rules	What could happen next? What actions will lead to? What would you do now? How could you...	Experiment, demonstration, interview, journal, problem solve	____%
Understanding - Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating the main ideas	How would you explain...? Can you outline...? What do you think could have happened next...?	Explanation, definition, comparison, classification, example creation	____%
Remembering - Retrieving, recognizing, and recalling relevant knowledge from long-term memory	How many...? What is...? Who was it that..? When did.. List the..	Worksheet, List, fill in blanks,	____%
Non-cognitive/ direction following - Procedural tasks that do not require significant cognitive effort	Color this red... glue this shape here... draw a line here.., stack your books here... Listen to me explain...	No questions are being asked. Student is following directions or listening/ watching	

Appendix C

**North Coast Arts Integration Project
Final Summary Report of Quantitative Data Analysis
Dale Oliver, Humboldt State University
May 31, 2018**

The purpose of this report is to provide a final analysis of data gathered to assess the impact of the North Coast Arts Integration Project (NCAIP) on Student learning. With the submission of this report to the NCAIP leadership, the work of the Arts Integration Evaluation – Quantitative Data Analysis Project is complete. The following directive is from a March 15, 2018 email conversation between Project Leads Bill Funkhouser and Heather Gaierah (Eureka City Schools), Lead Evaluator Jack Bareilles (Northern Humboldt Unified High School District), and Principal Investigator Patty Yancey (Humboldt State University).

- The existing Memorandum of Understanding shall be limited to the end of May, 2018.
- Dr. Oliver will write a summary report of his analysis of the available data by May 31, 2018.
- Due to the limited connection between California Assessment Program tests scores in Mathematics and in English/Language Arts and the professional development program for individual teachers, the majority of the analysis in the report will be of the levels of student engagement in participating Teachers.

Because of a paucity of and relevant data on student learning, and because of the departure of the initial Principal Investigator for NCAIP, the extent of the analysis is about one-third of that which was projected at the inception of the project. Therefore, the total expenditures for the data analysis is approximately one-third of the original projection of \$15,000 over 3 years.

Summary Findings

We were not able to conduct a quasi-experimental design with a control group, and thus we cannot answer the question about the impact of the NCAIP on student learning with support from quantitative data analysis. We were able to note some promising trends in test data for students in middle schools who had at least 50% of their teachers participating.

After the first cohort (grades 6 through 8 teachers) we redirected our data collection and analysis efforts for the second (3 – 5) and third (K – 2) cohorts to answer the question: what is the impact of the NCAIP on student engagement in the classroom? The results, which are statistically significant and which are confirmed in three different ways, are promising. We observed that for teachers participating in the NCAIP, there was a 46% increase in desired student engagement between pre-treatment and post-treatment classroom observations.

Cohort I: Teachers of Grades 6 - 8

At the end of the first full year of implementation of the NCAIP, after approximately it was evident that data on student learning, primarily measured through annual test scores in Mathematics and English/Language Arts, was too far removed from the treatment experienced by teachers through the

Arts Integration Program. For example, if fewer than 50% of the teachers of students in middle grades within a given school participated in NCAIP, there was significant variation among those students in terms of the percent of their learning experience with a participating teacher. Because of this variation, we were not able to construct an adequate comparison group of teachers for those in the NCAIP. Even so, two positive trends were observed after the first full year of project implementation in two of the schools that had at least 50% of their middle grades (6 – 8) teachers participate.

Zane Middle School and Trinity Valley School (K-8) each had at least 50% of their middle grades teachers participate in NCAIP. When compared to a set of similar schools, Zane middle school saw unusually high growth in student performance in Math from 6th to 7th grades for student who were in 6th grade in 2015. Likewise, Trinity Valley Elementary School (grades 6 – 8) saw unusually high growth in student performance in English/Language Arts from 6th to 7th grade during the same time period. The growth in each case was more than two standard deviations above the mean growth of comparable schools. The growth for Zane and Trinity Valley were within one standard deviation of the mean growth of comparable schools in all categories. While these observations do not imply that participation in the NCAIP necessarily impacted student learning in a positive way, at least the learning data for students in these two schools with at least 50% teacher participation is going in the right direction. In other words, students at both schools performed at least as well (better in the two specific instances listed above) as comparison schools before and after the NCAIP.

Changing the focus to student engagement in the classroom

After the realization that linking student learning outcomes as measured by annual testing to teacher participation in NCAIP was problematic, the project personnel and evaluators looked toward analysis of the levels of student engagement as observed in the classrooms of teachers who participated in NCAIP. In particular, how does a teacher's participation in NCAIP influence student engagement in learning activities?

To measure student engagement, project personnel developed, tested, and established inter-rater reliability of a classroom observation instrument. During a classroom visit, the observer characterizes student engagement in increments of 15 minutes (at least three different time increments per observation). The engagement levels are as follows:

Level 5: Higher-level student engagement

The student is actively using one of the higher-order processes (create, evaluate, analyze) in the context of the learning segment.

Level 4: Active student engagement

The student is actively doing something other than sitting (solving, writing, graphing, etc.) but not demonstratively bringing creative elements to the activity.

Level 3: Passive/Receptive

The student is sitting quietly as expected by the teachers, but not activity doing anything other than watching/listening.

Level 2: Not engaged/ Retreatism

The student is disengaged from the task. They are not disruptive.

Level 1: Disruptive/Distracting

The student refuses to participate in the task, disrupts or distracts others.

Thus, in a given observation of a classroom with, for example, 25 students, the observation record would include 75 (or, 100 if four 15-minute segments are marked) tallies across the five levels, indicating numerically the levels of student engagement observed in the classroom. Then, for each classroom observation, a weighted average of the tallies is used to produce an "engagement index" of the classroom observation.

For example, for the observation record shown here,

Engagement Level	5	4	3	2	1
Tally	5	40	20	5	5

the engagement index of the observation would be $55+404+203+52+5(1)5+40+20+5+5\approx 3.47$.

Cohorts II and III Teachers of Grades 3 – 5; Teachers of Grades K – 2

The data included in the analysis was restricted to those teachers who participated in NCAIP and were observed in similar conditions at least once prior to their participation and at least once after their participation. This pre- and post- data was matched so that, for each teacher, the number of classroom observations before and after NCAIP participation was the same.

To achieve an acceptable sample size for the analysis, the pre- and post- NCAIP observation records from teachers from Cohorts II and III were pooled into a single sample. Thus, data from a total of 28 teachers, 18 teachers of grades 3 – 5 and 10 teachers of grades K – 2, was analyzed via a paired T-test of sample means, with sample size 28. An NCAIP Engagement Index was calculated for the pre- and post-NCAIP observations for each teacher.

Running a paired T-test of the sample means requires that the distributions of the 28 differences between pre- and post- NCAIP Engagement index reasonably symmetric (approximately normal). The Box and Whisker plot validates this requirement.

The Mean and Standard data from the sample are shown below.

	Pre-NCAIP Observation	Post-NCAIP Observation
Mean, Engagement Index	3.35	3.62
Std. Dev., Engagement Index	0.31	0.44

The null hypothesis for the Paired T-test of sample means is that the difference between the means pre- and post- is 0. In other words, the null hypothesis claims that any observable difference in the means is due to chance.

The calculated p-value for the one-tailed test for the data is 0.00397, well below the standard tolerance of 0.05. Therefore, we can reject the null hypothesis, and conclude that the difference that we observe between the pre- and post- measures is not due to chance.

Cohen's D is a statistic that provides an estimate for the effect size of a treatment such as the professional development experience in NCAIP. For this data, Cohen's D is approximately .6, indicating a medium (neither weak nor strong) effect size.

The analysis of the Engagement Index provides meaningful and statistically significant evidence that teacher engagement in NCAIP correlates with a higher level of student engagement in the classroom.

Analyzing the data categorically

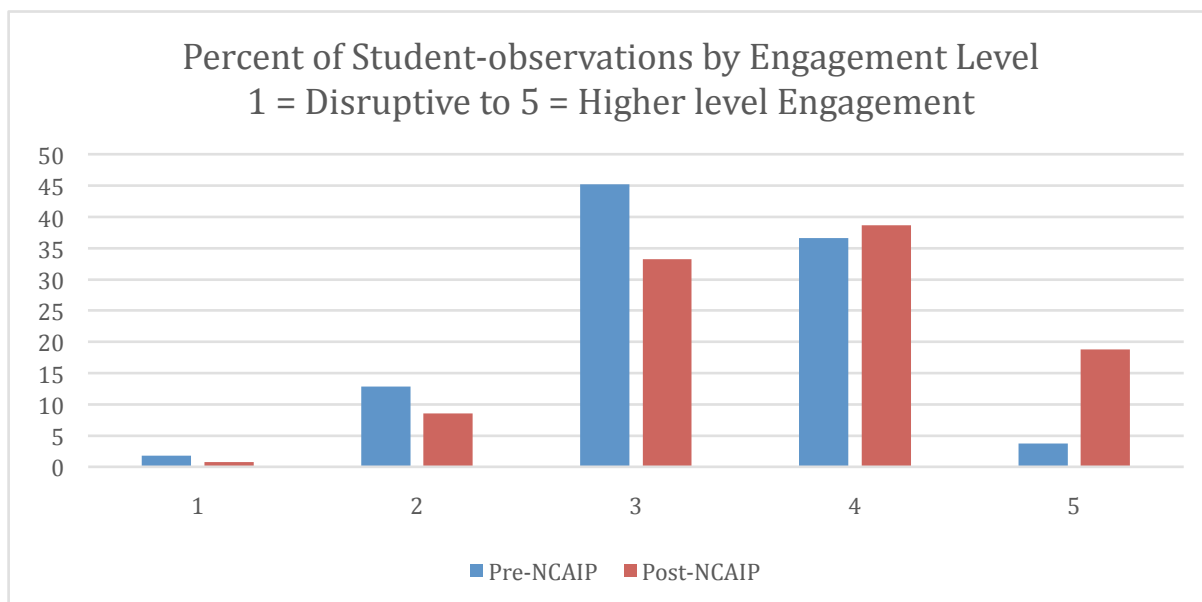
In the previous sections we translated the categorical data of the observational reports to a continuous random variable which we called the Student Engagement Index. In this section we study the data as presented, using a chi-squared goodness of fit test and a simplified empirical test, to determine whether the differences we observe between pre- and post- classroom visits can be attributed to randomness.

For our baseline data, we first compute the percent of student observations within each engagement category for each of the 28 teachers. Note that this percent is not a percent of students, but a percent of student-observations. We do not have data at the individual student level - simply a count of students in the classroom every 15 minutes that are characterized by each level of engagement. Thus the percents are indicative of the classroom environment as a whole, and are attributed to the teacher - not to the individual students.

We then take the mean of these percents across all teachers so that no individual teacher has more or less influence on the data. The data is presented in table and chart form below.

Level	1	2	3	4	5
Pre-NCAIP	1.8	12.8	45.2	36.6	3.7
Post-NCAIP	0.8	8.5	33.2	38.7	18.8

Percent of student-observations by Engagement Level

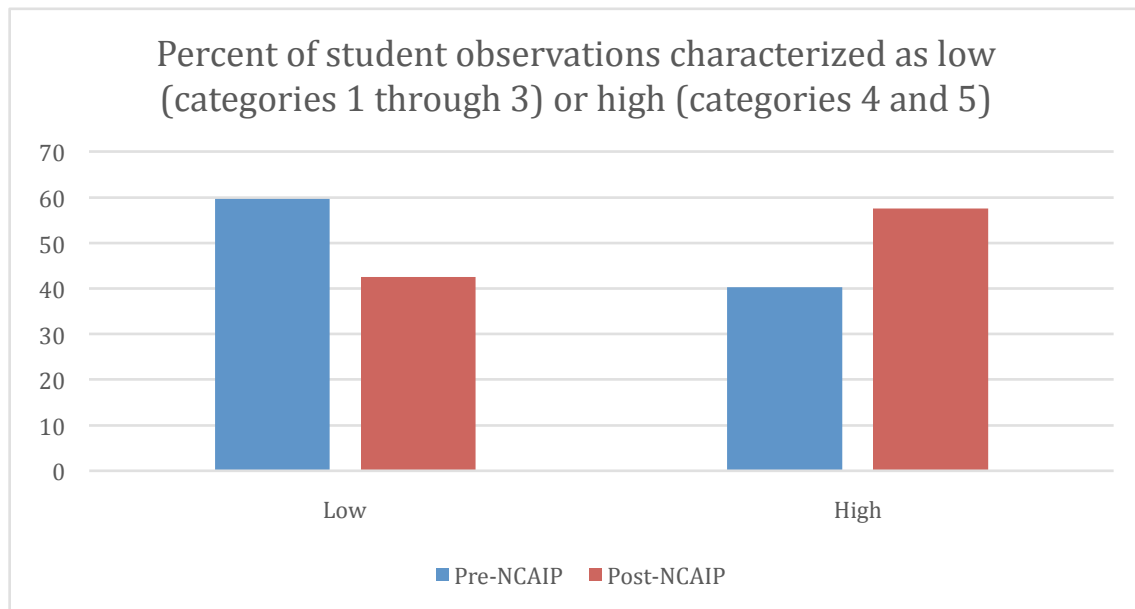


The chi-square goodness-of-fit test (1 degree of freedom) returned a p-value of 0.0005, which indicates that the variation we observe between pre- and post- classroom observations is not likely due to chance.

A binary view of student engagement

If we combine characterizations of student engagement into two classes (High Engagement for characterizations 5 and 4; Low Engagement for characterizations of 3, 2, or 1), we can repeat categorical analysis using an even more simplified view. For each teacher we calculate the percent of student observations pre-NCAIP which were characterized as high engagement, and the percent of student observations which were characterized as high engagement. The data is presented in table and chart form below.

Engagement	Pre-NCAIP	Post-NCAIP
Low	59.7	42.5
High	40.3	57.5



Following the Empirical Rule for binary data, assuming we sample 100 student observations from pre-NCAIP classrooms, the mean and standard deviation of high engagement for the sample space is 40 and 4.9 respectively. Therefore, 95% of the samples from the pre-NCAIP classrooms would fall between 30.2 percent and 49.8 percent for high engagement. The post-NCAIP data, with 57.5 percent high engagement, is well above the expected interval. Therefore, we can conclude that it is highly unlikely that the post-NCAIP data is a sample from the baseline condition.

Limitations of the data

The data analyzed here is based on discrete judgements of a classroom observer about the level of student engagement within a 15-minute time interval of a learning segment. The measures are a proxy measure for both student learning (higher levels of observed engagement imply a higher probability that students are learning) and, perhaps more appropriately, a proxy measure for the utilization of student-centered teaching strategies by the classroom teacher. In either of these interpretations, more student-observations in higher categories is the desired outcome.

Between pre-NCAIP observations and post-NCAIP observations, the teacher, grade level, and school site remain constant. However, the individual students, and number of students in the classroom varies since the pre-NCAIP observations and post-NCAIP observations occur in successive school years. Moreover, although all classrooms in the study are self-contained (all subjects taught by the same teacher throughout the day), the time of day and sub about what the teacher orchestrates with her students to motivate engagement. How these factors influence the data is not known. Even so, the statistical analysis outlined above lends confidence to the assertion that the differences we observe between pre-NCAIP observation and post-NCAIP observations is not a result of randomness, and that the participation by teachers in the NCAIP contributed to an increase in student engagement in their classrooms.

Appendix D

Teacher/I.D. _____ Grade _____ School _____ Date _____

NCAIP Observation Document/ ID #:

Time in __:__:__ Time out __:__:__ Subject/Lesson _____ Observer: ____ Co-Observer ____

ABCDEFGHIJKLMN OPQRSTUVWXYZ

Student Engagement Observation							
Minimum observation time is 15 minutes — Minimum Observations = 3							
Please do not do the first observation for at least four minutes after entering the classroom.							
Time of observation (5 min increments)	# of students in class	% of tasks classified as higher order thinking	# of students per engagement level				
			5	4	3	2	1
Obs. #1 __:__:__		____%					
Whole class _ Sm. group _ Ind. work							
Obs. #2 __:__:__		____%	5	4	3	2	1
Whole class _ Sm. group _ Ind. work							
Obs. #3 __:__:__		____%	5	4	3	2	1
Whole class _ Sm. group _ Ind. work							
Obs. #4 __:__:__		____%	5	4	3	2	1
Whole class _ Sm. group _ Ind. work							

Comments: Student created visuals ____% of all visuals in the room; Curricular student talk ____% of observation time

Classroom environment & practices			
Promotes Engagement	Promotes Collaboration	Arts	Other
Structured student talk	Group or partners seating	Arts integrated into other content	Teacher moving/ checking
Random calling	Peer review/ editing	Artist work in class	Formative assessment
White boards/ hand signs	Partner problem solving	Student art in class	Effective attention signal
Active learning strategies	Group norms defined	Drawing/Painting	Concept visuals/ maps
Reflective writing/ talking	Group norms observed	Multimedia	Objectives clear
St. performance/ creation	Group work procedures	Sculpture	Clear procedures
Cultural diversity integrated	Collab.	Dance	Goal setting by students
Students choose work	example _____	Music	Problem solving
Wait time used well	Example _____	Theater/ drama	Student self assessment
Other _____	Example _____	Other _____	Other _____
	Other _____		

Student Engagement Levels		Examples grades 3+	Examples grades TK-2
Level 5	Creative Student Engagement The student is actively using personal creativity, expression or choice. The student's unique needs, desires, viewpoint or history are integrated into the work.	Create a skit that shows what Grant and Lee were thinking during the surrender at Appomattox Court House. Write a paragraph describing what a perfect day would be for you. Create any five equations that all have a solution of $x=9$ You can choose to either create a drawing or a sculpture of a cell.	Let's move around the circle like a spider. Draw a picture of something you remember from the story and then tell me about it. Can you think of another way to solve this problem? Show an emotion on your face and we will try to guess what emotion you're showing.
Level 4	Active Student Engagement The student is actively doing something other than sitting. They are doing what is asked (solving, writing, graphing, etc) but not bringing personal, creative elements to the work.	Finish this worksheet Use the word bank to fill in the missing word in each sentence. Read this page silently to yourself. (and student appears to be reading or following the reader with their finger on the page) Look up the order in which these devices were invented and complete the timeline..	What do you think is going to happen next in the story? (during read aloud) Whisper to the person next to you the number that comes after 19. If these words rhyme, smile- if not cross your arms. Create the number 8 on your 10 frame.
Level 3	Passive/ Receptive Student is sitting quietly as expected by the teacher. They are not distracting others but not actively doing anything other than watching/ listening.	Student sitting while hearing instructions. Student sitting while another student is answering a teacher question. Student waiting when instruction has ended.	Sitting quietly during read aloud. Sitting during instruction. Having a book in front of them while the teacher is reading.
Level 2	Not engaged/Retreatism Student is disengaged from the task. They are not disruptive.	Daydreaming, head on desk or looking elsewhere when should be complying with teacher directions. Sitting quietly when that is not what student was asked to do.	Sitting quietly when an assignment is given Rolling on the floor but not distracting anyone. (not in control of body- not intentional) Having a book in front of them that they are supposed to be reading
Level 1	Disruptive/Distracting Student refuses to do task, disrupts or distracts others.	Student refuses to do task, disrupts or distracts others. Talking to/ distracting a student who is trying to work.	Intentionally distracting, disrupting or throwing a tantrum.

Higher order thinking

Some types of learning require more cognitive processing than others. In Bloom's taxonomy, for example, skills involving analysis, evaluation and synthesis (creation of new knowledge) are thought to be of a higher order, requiring different learning and teaching methods than the learning of facts and concepts. Higher order thinking involves the learning of complex judgemental skills such as **critical thinking** and problem solving. Higher order thinking is more difficult to learn or teach but also more valuable because such skills are more likely to be usable in novel situations (i.e., situations other than those in which the skill was learned).