Art TEAMs Year 4 Report

Guy Trainin
Kimberley D'Adamo
HyeonJin Yoon
Azadeh Hassani
Zohreh Tamimdari
Jiabin Lyu
Michael Nti-Ababio
Sarah Trainin

Executive Summary

Art Disciplines and Related Content Areas Addressed

The project addressed different art forms including: (1) Visual arts, (2) Emerging media arts, (3) Ceramics, and (4) Theater/Drama. Other content areas included: (1) Science, (2) Language arts, (3) Social studies (4) Family and Consumer science, and (5) Career and technical education.

Overview of Completed Project Activities

The project's research and evaluation team are continuously monitoring data collection from all measures and research procedures including interview protocols, observation measures, teacher logs, and student outcomes. We are working with the second cohort of educators and were able to deliver our academic year workshops during Summer and Fall workshops with great feedback from participants while maintaining contact with cohort one for dissemination and tracking long term impact.

The workshops deepened knowledge and efficacy in the Art TEAMs themes. Courses A through D were designed to bring art integrated experiential learning combined with theoretical knowledge. The courses delved into the foundational ideas of Art TEAMs and how they can be operationalized in the classroom. Through the sessions, we explored how to scaffold students' learning through inquiry, making, and engaging in culturally responsive practices, which were enriched by interactions with teaching artists. Teachers deepened their understanding of Art TEAMs core constructs.

We discussed pedagogy and practical approaches to teaching any subject through trans-disciplinary themes, arts, and emerging media. In the course, we provided a platform for teachers to create instructional plans for the academic year. The program fostered an environment that allowed teachers to take a step back, deepen their understanding of theory, engage in slow planning, writing, making, and imagining new directions. We empowered teachers to enhance their teaching methods and incorporate innovative practices that inspire students to learn and grow.

Course G closed the professional sequence prioritizes time for implementation of theory and practice from all course work in the grant. Most of our time was spent reflecting on teaching practice, curriculum choices, reviewing student work, and sharing those experiences. Teachers explored their practice as they planned, executed, and reflected. Teachers engaged in looking at evidence to make curriculum and pedagogy decisions. Professional Development courses as detailed in Section C of the full report.

The Art TEAMs leadership and evaluation teams visited and observed all the educators in their classrooms. We also completed all data collection that referred to professional learning outcomes and classroom implementation. The project outreach team has created a strong digital presence on social media, our website, and through the Art TEAMs podcast. The project team and teachers have presented five sessions in the Nebraska Art Teachers Association in late Fall and five different sessions during the National Arts Educators Association annual meeting in the Spring. As well as a presentation in the AACTE annual conference in February 2024. The project was also honored to present the school university collaboration at the AAE convening in March 2024.

Achievement of Expected Outcomes and Performance Measures

Most–though not all–of the outcomes and performance measures outlined in the Art TEAMs timeline were achieved. Student outcome measures will be included in the ad hoc report in early Fall.

Successes and/or notable highlights of the project

Many teachers have shared that the program is helping them assert their efficacy and freedom to teach all students, they attribute this to:

- Capacity to deal flexibly with ambiguity.
- The ability to make thinking visible for teachers and subsequently students.
- Learning from peers, scholars, and students
- Creating positive affect

- Keeping teaching artists engaged. We are now teaching artists in highly focused shorter time commitments. This will also allow teachers to experience a more diverse range of artists.

The responsive aspects of the emergent curriculum for professional learning were a critical aspect of the grant and we have a paper in preparation that will be sent to publication this summer. In addition, the practices have been transformative in the Special Education classroom as has been demonstrated by the work of Megan Pitrat, one of our teacher participants/researchers. Excerpts from a soon-to-be-published chapter are included.

Challenges in project implementation and lessons for moving forward
Recruiting administrators and artists

Shifting to personalized meetings with school administrators, complemented by a single-day summer professional development session, has been met with positive feedback. The integration of Art TEAMs's core concepts is proving effective in engaging school leaders. A notable successful method involves teachers inviting administrators to join in the Exhibitions of Learning, which are school-wide showcases highlighting student work. These exhibitions are designed to foreground student autonomy and expression, while also celebrating their educational journey. Administrators have shared informally that teachers who participate in these events seem more inspired and committed, with noticeable improvements in student accomplishments.

Sustaining Practices with Cohort 1 Teachers

Teacher logs and classroom observations show that teachers continue using the strategies explored in Art TEAMs in their classrooms on a regular basis. We are designing strategies to keep supporting their work and growing leadership in their buildings.

Project Contributions to Research, Knowledge, Practice, and Policy

The project is in its fourth year, and we are growing our evidence. We have growing insights that are taking form in three papers in process:

1. The impact of teacher Arts base Journaling on teaching practice
2. The creation and impact of emergent curriculum of professional learning

Challenges to Implementation

1. Shifting from local work (in and around Lincoln and Omaha) to statewide work adding North Platte.

Introduction

Year Four of the Art TEAMs grant was designed to continue the professional learning for cohort two while following cohort one to measure implementation sustainability. Our second cohort of educators are excited about the program and bring great diversity in art forms including five ceramics teachers, a digital media teacher, and generalists from career and technical education and family and consumer science. This diversity of teaching domains help illustrate the versatility and impact of the arts across k12 curricula. We have revamped our professional learning curriculum and the process of learning from the educators who take part in the program. We believe that the process of co-creating an emergent professional learning is one of the most important outcomes of our curriculum development as it exposes the processes that can support co-creation making the curriculum adaptable across contexts. Finally, our dissemination efforts have culminated in multiple presentations at conferences, publications and awards.

Partnerships

1. School systems: The school district actively collaborates with the grant initiative to enhance educational practices through targeted professional learning strategies. This partnership focuses on equipping teachers with innovative tools and methodologies, such as creative journaling, to enrich the learning experience. We have extended our partnerships to four additional school districts.
    a. Gretna Public Schools
    b. Lincoln Public schools- the project
    c. Nelson Mandela Elementary
    d. North Platte Public Schools
    e. Omaha Public Schools
    f. Syracuse -Dunbar-Avoca schools
    g. Westside Public Schools
2. Joclyn Art Museum
3. Advisory Board- brings new ideas on how teachers and students use emerging media arts to learn across the curriculum. Their expertise will enhance the professional learning, dissemination and sustainability efforts. Student peer collaboration leads to interdependence and sharing of knowledge, building upon others' strengths.
    a. Diana Cornejo-Sanchez, Superintendent High Tech High San Diego, CA.
    b. Jorge Lucero- Professor of Art Education, Associate Dean for Research, University of Illinois, Urbana Champaign.
    c. Megan Elliott- Founding Director- Johnny Carson Emerging Media Arts center, University of Nebraska Lincoln.
    d. Ann Thulson- Professor of Art Education, Metropolitan State University Denver, CO.
    e. Lois Hetland- Professor of Arts Education and Chair of Art Education, Massachusetts College of Art and Design.
    f. Cody Talarico- Fine Arts Education Specialist Nebraska Department of Education.

Curriculum Plan for Year 4

Year 4 Cohort 2	*Fall 2024* ▪ Course C Curriculum Prairie as Home	*Spring 2025* ▪ Course D, Cotemporary emerging media arts	*Summer 2025 (Cohort 2)* ▪ Course E/F designing new units for the following school year while deepening knowledge of Arts Integration

Curriculum Design

The curriculum for teacher professional development has been created in an effort led by Co-PI Kimberley D'Adamo with PI Trainin and curriculum designer Larsen.

Changes to Course C/D Curriculum from Cohort One to Cohort Two

This report outlines key changes made to the curriculum for Course C/D in the second cohort of the Art TEAMs professional development program. These changes were in response to extensive feedback given by teachers at the end of Cohort One. These responsive adjustments reflect our ongoing commitment to an emergent, arts-centered curriculum design rooted in inquiry, culturally responsive practices, and the integration of contemporary and emerging media arts (EMA) and driven by a co-research partnership with our teacher-participants.

In the 2024–2025 program year, we introduced a significant redesign of Courses C and D, shifting from a more generalized unit planning focus for cohort 1 to a unified, arts-integrated inquiry model titled "The Prairie as Home" for cohort 2. This shift allowed us to model how an inquiry-based, arts-centered approach could unfold in a 6th grade classroom, while supporting participating teachers in oscillating between the roles of student, reflective practitioner, and curriculum designer.

Overview of Cohort One's Course C/D

In Cohort One, Courses C and D focused on designing interdisciplinary curriculum units using Art TEAMs strategies. Teachers worked independently on classroom implementation plans that connected to their personal goals and subject areas. While this autonomy was effective for customization, feedback indicated a need for a more cohesive shared experience and clearer modeling of the inquiry cycle.

Modifications for Cohort Two's Course C/D

1. Introduction of the "Prairie as Home" inquiry unit

The redesigned Course C/D centered on a unified project that invited teachers to experience a 6th-grade-level inquiry cycle firsthand. Drawing from place-based education, speculative design, and ecological literacy, the "Prairie as Home" unit engaged participants in exploring their local prairie ecosystem through both scientific and artistic lenses. This included:

- Research into real prairie organisms and ecological relationships
- Designing whimsical, speculative safety gear for prairie creatures

- Using recycled and natural materials in combination with EMA tools (e.g., digital sketching, video, or animation)

2. Structured Student-Teacher Role Shifting

Teachers alternated between acting as students–immersing themselves in the creative inquiry–and stepping back as educators to reflect on the pedagogical moves. Daily "meta-moments" encouraged participants to debrief the experience through a teacher lens, discussing classroom management, cross-disciplinary connections, and adaptations for their own students.

3. Emphasis on Speculative and Whimsical Thinking

Inspired by contemporary art practices, the project emphasized whimsy, imaginative storytelling, and design-thinking as entry points into integrating art, language development, science and ecology. This focus helped teachers consider how joy, play, and emotional resonance support deeper learning and belonging.

4. Scaffolded Application of Curriculum Design

Unlike Cohort One, where teachers worked in parallel on varied projects, Cohort Two participants were given a shared framework to analyze and adapt. After experiencing the Prairie as Home unit, teachers worked in grade-level teams to develop modified versions of the unit for their own classrooms. These included adaptations for different age groups, content areas, and community contexts.

Theoretical and Pedagogical Foundations

This curriculum redesign builds upon:

- Project Zero's Teaching for Understanding framework: Emphasizing understanding goals, performances of understanding, and reflective assessment
- Reggio Emilia Approach: Centering the classroom environment as the third teacher, valuing documentation, and honoring the image of the child as capable and curious
- Making Thinking Visible: Encouraging metacognitive reflection through visible thinking routines and documentation of process
- Art TEAMs Practices: Rooted in co-construction, student agency, and interdisciplinary artmaking
- Christopher Emdin’s co-generative dialogues: Encouraging collective meaning-making between teachers and students
- Jorge Lucero’s concept of schools as malleable material: Treating the institution and curriculum as open to artistic and cultural intervention
- Place-based and ecological learning: Engaging the prairie as a metaphor for community, resilience, and rootedness

Participant Outcomes and Feedback

Initial feedback from Cohort Two teachers highlights the effectiveness of the shared inquiry cycle:

- Teachers reported greater clarity in how to design and scaffold inquiry in their own classrooms
- Participants found value in experiencing the unit "as students," noting how it deepened their empathy and classroom design instincts
- Many appreciated the combination of whimsy and ecological literacy, and expressed plans to adapt similar projects using local ecosystems

Conclusion

By redesigning Course C/D around a shared inquiry unit, we successfully modeled how teachers can use arts-based, interdisciplinary projects to support critical thinking, emotional engagement, and place-based belonging. The Prairie as Home unit offered a compelling anchor for arts integration, while the role-switching between student and teacher provided rich opportunities for metacognitive reflection and transfer. These changes mark a significant evolution in our emergent curriculum model and reinforce our commitment to responsive, arts-centered professional development.

Evaluation Activities

The research and evaluation team has developed a structured equity-based collection of evidence that will allow us to support strong claims about the impact of the Art TEAMs approach. Figure 1 shows a representation of the evaluation map.

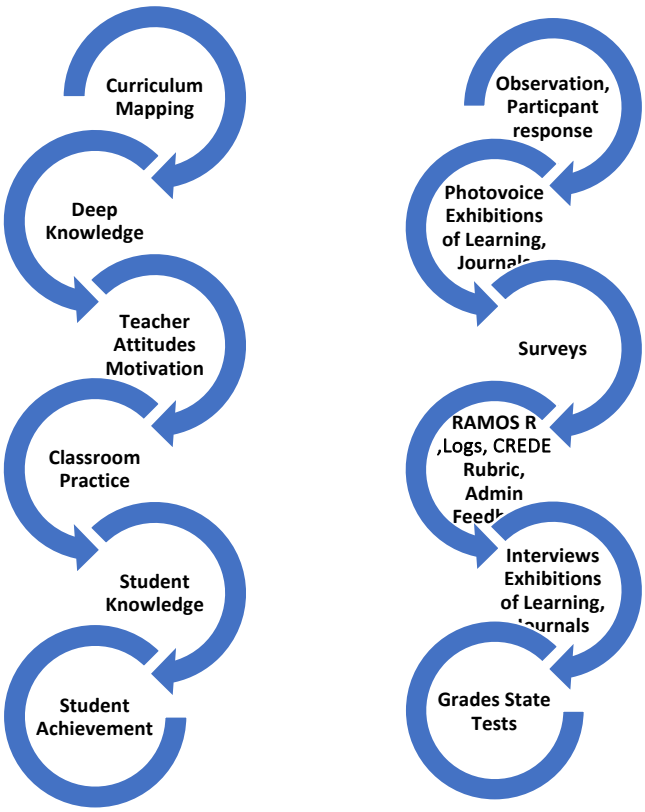

Figure 1. Evaluation Map

Research Results

A study on Co-Creation and Emergence in Art TEAMs' Curriculum Development

Presented at AERA and under consideration for publication

This study examines the dynamic process of emergent curriculum development within Project's professional learning workshops, based on social constructivist educational philosophy and project-based learning. Utilizing a qualitative ethnographic case study, our research captures the multifaceted narrative of curriculum evolution shaped through collaborative efforts in a

professional learning project in and through art among the project's instructors and art and generalist teachers. Findings highlight how the emergent professional learning curriculum is co-created and continually refined through "Curriculum as Conversation," a pedagogical approach that prioritizes dialogue and participatory engagement. This research underscores the importance of reflexivity and metacognitive awareness in fostering a progressive adaptive community of learning that responds to the nuanced needs of educators and learners.

A Cross-Case Analysis of Three Teachers' Practice Growth during Professional Learning

Introduction

This study explores the implementation of arts-integrated curricula by teachers participating in a two-year professional learning program in Art TEAMs. The research investigates how teachers engage with, adapt, and sustain arts integration practices over time, and examines the impact on their instructional approaches and student engagement. We begin with a theoretical foundation of transdisciplinary learning through arts integration, highlighting how this approach transcends disciplinary boundaries to foster conceptual, procedural, and metacognitive skills. It discusses how arts integration can create learning environments that encourage collaborative thinking, critical analysis, and complex meaning-making. The study then examines the challenges teachers face when implementing arts-integrated instruction, including limited confidence in artistic abilities, alignment with academic standards, and time constraints.

The study follows three teachers, documenting their experiences implementing arts integration practices in their classrooms. Through detailed case studies, the research tracks how these educators incorporated journaling, collaborative projects, visual thinking, and other artistic approaches into their teaching, while measuring changes in their self-efficacy and arts integration efficacy over the course of the program. This research contributes to our understanding of how sustained professional learning can support teachers in developing effective arts-integrated curricula and the positive impacts these approaches can have on both teachers and students.

Professional Learning in Art integration

Arts integration is a curricular approach that combines artistic processes with academic content to deepen student learning in both areas. Catterall (1998) proposed two lenses for understanding the role of the arts in education: "learning through the arts," where the arts serve as a medium for exploring academic subjects (e.g., dramatizing historical events), and "learning in the arts," which focuses on the development of specific artistic skills in disciplines such as music, drama, or visual arts.

Implementing arts-integrated instruction requires teachers to go beyond content delivery; it demands interdisciplinary thinking, pedagogical creativity, deep student engagement, and expand students' curiosity with teachers (Marshall, 2014). While content-focused professional learning has demonstrated effectiveness in improving instructional quality and student outcomes (Darling-Hammond et al., 2017), arts integration presents additional challenges. Teachers must not only apply artistic strategies and design cross-disciplinary lessons, but also cultivate rich, responsive interactions with students (Liu, 2024). As such, professional learning in this context must address more than subject knowledge—it must support inquiry, collaboration, and alignment with school culture to foster sustained instructional change.

Research has linked professional learning to improvements in teaching quality, student outcomes, and teacher beliefs and practices (Beswick et al., 2016; Darling-Hammond et al., 2017). However, few studies have explored how teachers implement arts-integrated curricula over time within the context of sustained professional learning. Given these challenges and the limited literature on how teachers implement arts-integrated curricula within long-term professional learning contexts, this study investigates how teachers engage with, adapt, and sustain arts integration practices over the course of a two-year professional learning program.

Synthesis

In this study we explored how teachers are implementing arts integrated curriculum in their classrooms over a two-year professional learning.

1. How do teachers implement an arts-integrated curriculum in their classrooms over a two-year professional learning program?
2. What impact does this have on their instructional practices and student engagement?

Findings

Amelia

Amelia was a veteran interdisciplinary art educator and artist for an Arts Focus Program for the Jefferson School District. Her personal artistic practice centers on the creation of multimedia and mixed media works. Amelia participated in all the data collection phases, responding to seven data collection points.

Several types of data were collected from the participants including a self-report survey about the teachers' use of Art TEAMs practices in their classroom and a survey about self-efficacy. Figure 2 shows the number of lessons using Art TEAMs practices and Amelia's reported teaching efficacy and efficacy for arts integration. Participants were asked questions about self-efficacy, collective efficacy, arts integration, their sense of belonging, and their efficacy for Art TEAMs practices.

In September, Amelia engaged her students in multiple parts of the creative research process including regular journal reflections and finishing up a sound installation piece. Most students wanted to work on finishing their pieces, but some were still struggling to get their vision into their physical project. Amelia has struggled to keep the students from getting lost in the process. In the future, she wanted to have the students work together, which would ideally lead to new ideas. Amelia, a seasoned art teacher, started with a high efficacy score for arts integration and a lower score for self-efficacy.

In October, the students moved on to a new unit about perceived and real monsters in life. Students had opportunities to journal, look at art history, contemporary art, and pop culture, and brainstorm together. Amelia was happy with this lesson and the collaboration she saw in her students. There has been quite a bit of individual problem solving in constructing their monsters which has gone well despite some students struggling to move past setbacks. Amelia said "I love being resourceful with my students and also encouraging them to be resourceful...This is really fun and presents a challenging road, but sometimes it is quite time consuming..." Amelia's efficacy score started to rise as she was resourceful with her students.

In early November, the students worked on different journaling techniques and planned out an exhibition of learning. The lesson was successful as students got the opportunity to learn from and push each other. Some students needed more scaffolding for their brief written descriptions and the whole class could have benefitted from more time. Amelia's efficacy score

for arts integration reached 6 in early November and would stay there for the rest of the reporting period.

In late November, the students moved on to a new unit focused on environmentally conscious art through the theme of *reuse or repurpose*. The class started by researching artists that incorporate the reuse or repurpose theme in their work. Students worked on a show for a local Quilt Museum using scraps of used feed sacks. Both Amelia and her students were excited. Since it was a new project there were some challenges working with the material. Amelia shared that despite some students who were still struggling with going beyond their first responses, "students are making connections with how they've come up with ideas throughout the semester, so that is exciting to see their divergent thinking."

In December, students continued their work on the feed sack collaborating with the local museum. The project integrated printmaking techniques, and students' collaboration spurred by Art TEAMs ideas led to richer ideas and more complex products. Amelia was delighted with the emerging ideas and how comfortable students have gotten persisting with their projects. Amelia's reflection included wondering whether it would be useful to have all students start with the same material/fabric. Throughout November and December, Amelia's self-efficacy score fluctuated slightly.

In March, the students focused on contemporary art. Students researched and journaled about contemporary artists and then created a two-page visual journal entry reflecting their own creative process as emerging artists. Students collaborated and then met with the teacher individually to make their process visible. The element of making thinking visible is a core concept in the project. Amelia shared that she has been working on making the process visible for a few years and that making the artistic process visible was invaluable for her students and for her as their artistic guide. The extensive journaling has made the lesson a pivotal point for students and has decreased students' anxiety about embarking on a creative process. Amelia did reflect that she would like to see if she can scaffold deeper thinking through more observations of artists into the lessons earlier so students have more examples when they think about their own process.

In April, students were engaged in a capstone class and used their creative research journal to respond to film clips and talk about their artistic process. The lesson was familiar to the students, yet they continued to take their thinking seriously, which pleased Amelia. With the end of the school year approaching, timing was a concern, but the routine of the lesson reduced the sense of urgency. One change Amelia wanted to make was to scaffold the end of class time to include a small group discussion of student observations so they can see commonalities and uniqueness of their processes. Throughout March and April, Amelia's self-efficacy score remained.

Summary

Amelia embraced using project practices in her classroom consistently (See Figure 2). Her students routinely used their journals. She provided her students with a routine for the research and creation process which let them succeed. Amelia has spent time reflecting on her lessons and refining them for her students. Despite her success and satisfaction from student work, Amelia reflected that time management and enhancing students' thinking about their process and their work would be beneficial for future classes.

Amelia felt that Art TEAMs practices were familiar, but the class provided her with ways to bring practices into her classroom in a meaningful way. Amelia reported feeling values as a

teacher and an artist in the Art TEAMs community. Specifically, regarding journaling, Amekia's students adjusted to and really cared about their journaling process. Having that outlet made students feel valued. Overall, the Art TEAMs program helped Amelia regain the feeling that teaching is important work, and she wanted to continue to do it.

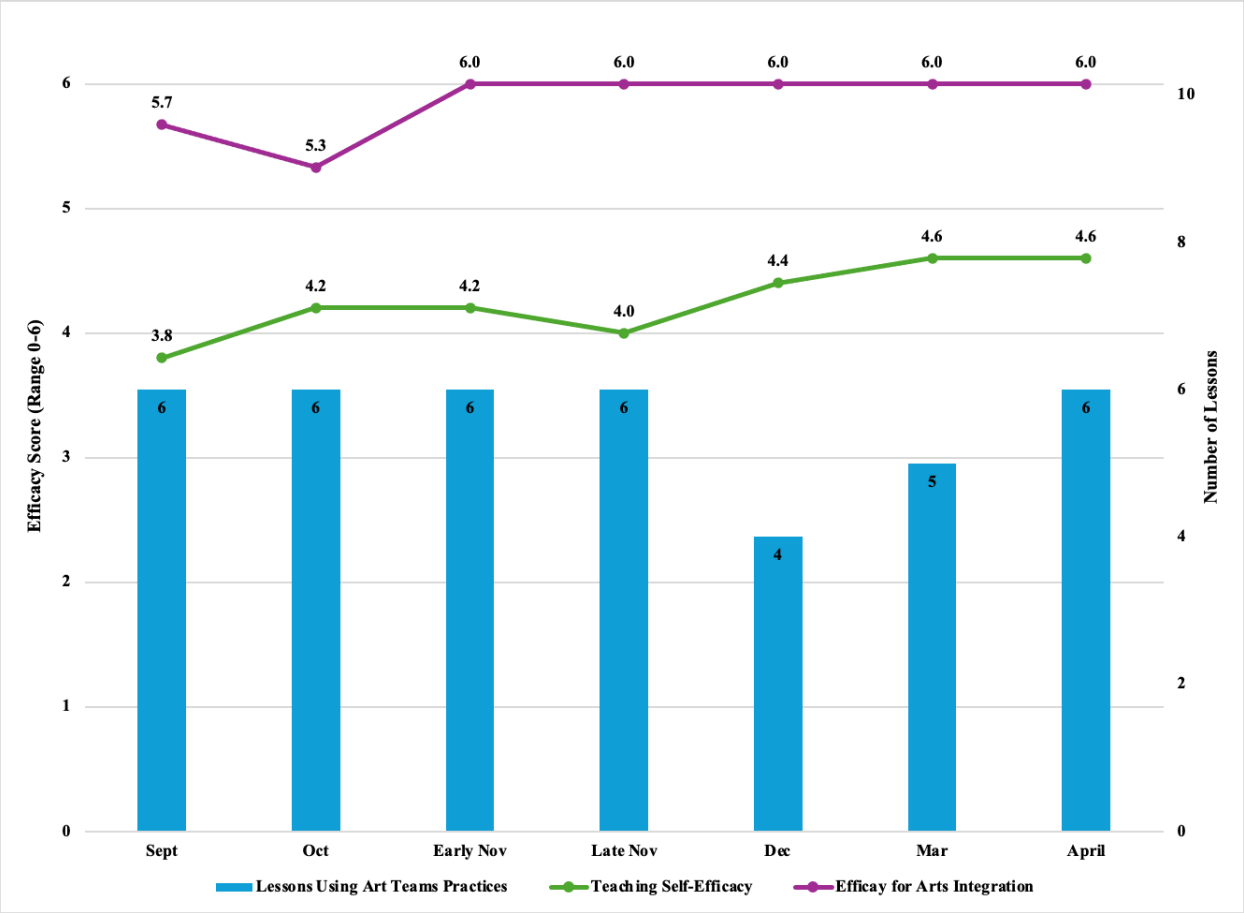

Figure 2. Efficacy Scores and Number of Lessons for Amelia

Max

Max was a veteran elementary art teacher and artist. He was particularly interested in student agency in his classroom. Max participated in six of the seven data collection phases. Since Max was the only art teacher students experienced his classroom once every five school days making work on themed projects challenging since students needed to be reminded of their goals and plans every time they met. Figure 2 shows the number of lessons using Art TEAMs practices and Max's reported teaching efficacy and efficacy for arts integration.

In September, Max worked with his students on the combined themes of a caring community and public art. Students worked with a partner to fill in a template that was turned into a pinwheel after identifying kind colors, lines, shapes, and an anti-bullying image. Max did not like the limited nature of making pinwheels but enjoyed the students getting to define the word "kind." One challenging aspect of the lesson was returning the pinwheels to the students as they had been wrecked by the weather. Overall, the collaboration portion for the lesson needed

more scaffolding but Max was pleased with how well the students worked together. Max started the school year with high self-efficacy and arts integration scores.

In October, Max and his students reflected on the theme of caring community through their creative thinking journals. Students worked individually on their journals but were encouraged to seek help from peers if they needed it. The class resumed the research stage for the themes of public art and murals. Max felt that the flow of the lessons was good and that student interest was high. The flexibility of the lessons allowed for students to take ownership of the class. Structuring closure was an issue and Max wanted to "look at the flow in class to allow for a better closure/meta moment to really catapult [his] students' connections class to class." Despite issues with closure, Max maintained his higher levels of self-efficacy and arts integration.

In early November, Max's class continued to explore public art in the form of murals and sculptures and formed teams to create a public art piece. The teams began to explore materials including pencils, markers, pastels, and paint. Max realized that he was moving fast through objectives and missed moments where students could have learned more by slowing down. Max's self-efficacy dipped as he wished the class could have slowed down to let his students linger on topics, they were curious about.

In late November, Max's class continued with the next part of their public art unit. Students used Google Maps to select a location for an artwork. Max modeled to his students an example to "feature connections between what art is about and where it is placed." Max felt good about this lesson after receiving some feedback about slowing down and softening transitions in the classroom. Overall, Max was happy to slow down and let his students drive the pace of the lesson. After receiving feedback and being able to improve his students' experience in the classroom, Max's self-efficacy increased slightly.

In December, Max's class began to develop their public artworks. Students focused on themes with the goal of celebrating community. Max felt like the lesson was too long, but that it was "allowing for tremendous growth in habits and routines needed for deep exploration." Max's students struggled to make immediate progress using Google Maps, but they supported each other in accessing tools and sharing their progress. With students persevering through a difficult task, Max's self-efficacy continued to rise.

In March, Max's class completed a different project a digital artwork collage which was the culminating action for the caring community work. Max enjoyed the growth of the themes over the school year. He was happy that the movement between group and individual work kept students engaged, pushed the students, and gave them agency. Max still wanted to improve the final synthesis moment of the lesson. By March and April, Max's self-efficacy had reached levels that were similar to the beginning of the school year.

Max dedicated months to a multipart project about caring community. Students were able to collaborate and work individually to create a variety of products. While Max's self-efficacy declined at the beginning of the year (see Figure 3) he was able to increase his self- and collective efficacy through the second half of the year while steadily integrating art into this classroom. Max focused on slowing down the processes in his classroom to allow for greater student agency, creation, and reflection moments.

One of Max's major takeaways from the Art TEAMs program were these metacognitive pieces. Taking time to think and consider things in a meaningful was important and something that Max's wanted to continue with his students. Max also had some personal growth. Over the two years, Max reported feeling more engaged in his own thinking and his own art practice

which he is then able to share with his students. Max also reported feeling a sense of belonging in the Art TEAMs group. Overall, Max planned to continue with the journaling, thinking walls, celebrations and creating a sense of balance between student freedom and skill building.

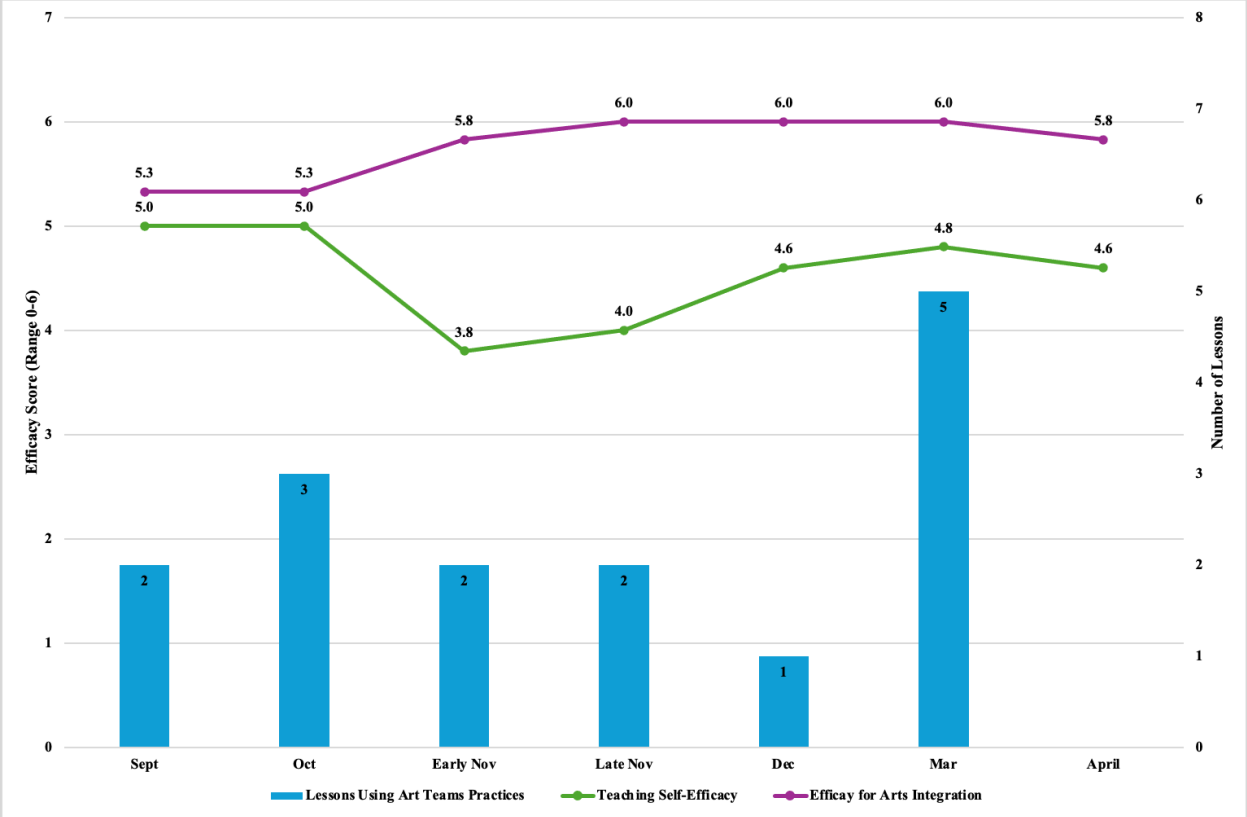

Figure 3. Efficacy Scores and Number of Lessons for Max

Nicholas

Nicholas taught early elementary students in a small school in which most of the students were African American. Nicholas' first career was in theater and then he became an elementary teacher. During this year of implementation, he was teaching a new language arts curriculum for the first time. This challenged his ability to innovate because of the considerable planning load but presented new opportunities for arts integration in a content driven curriculum. Figure 3 shows the number of lessons using Art TEAMs practices and Nicholas's reported teaching efficacy and efficacy for arts integration.

In October, Nicholas's class focused on a learning wall for their current unit called A Season of Change. Students chose pictures to talk about how changes affect people and nature. The class then created a mind map and brainstormed more ideas. Nicholas felt the lesson when well and the students became more confident and creative as the lesson progressed. Students were engaged in the lesson and didn't want to stop working. A change that Nicholas highlighted was to make was organizing the way students added paper to the learning wall. Nicholas started the school year with lower self-efficacy and arts integration scores.

In early November, Nicholas did a short three-day unit about pumpkins with his students. Students recorded everything they learned in their journals as the class watched videos and read books and articles. Nicholas felt good about the lesson but wished he could have gone deeper

into the topic and included a culminating project. Overall, Nicholas “wanted to use the time to introduce the journaling process and improve the quality of what they are writing in their journals.” Nicholas wanted to incorporate creating an artistic diagram of a pumpkin showing what students learned. Nicholas’s efficacy scores did start to rise throughout November.

In late November, Nicholas and his students worked on visually expressing their learning. Nicholas modeled visual notetaking and then allowed students to begin working. Students were given time to work on their journals using choice materials including colored pencils, markers, stencils and other materials. Nicholas felt good about the lesson but felt guilty that he was just getting started with the journals. Nicholas reported that scaffolding his students slides about visual note taking helped, but he knew that more scaffolds and modeling would be useful.

In December, Nicholas and his students began a new unit covering changes over time in the American West. Students created new research journals with information from books, articles, and videos. Also, students created timelines of the American West. Nicholas said that his students were gaining confidence with journaling. While the timelines took a long time to set up, students were doing their own research which kept them engaged. The scaffolding for the timeline needed to be improved in the future. Through December, March, and April, Nicholas’s efficacy scores had continued to increase, with his efficacy for arts integration score rising two whole points.

Nicholas made improvements throughout the first semester. His efficacy in the classroom (Figure 4) continued to increase as he introduced journaling to his students and continued to adjust as necessary. Nicholas stated that in the future when he is not implementing new curriculum, it will be easier to get started earlier on journaling and other Art TEAMs practices with students. Nicholas is optimistic about his ability to improve his lessons in the future to create meaningful experiences for his students.

One of the most important parts of these meaningful experiences for Nicholas was learning tools and strategies through the Art TEAMs program to help his students make their learning visible. One of the personal takeaways for Nicholas was being able to be more free and less regimented in the classroom. Despite the need for consistency in the classroom, Nicholas was able to go with the flow. He also reported being more confident at the end of the program. Nicholas saw changes in his students as they became more joyful, had freedom in the classroom, and improved their expressive language skills. Overall, Nicholas is excited to continue Art TEAMs practices in his classroom, especially the journals, learning walls, movement, and collaboration. Nicholas stated he “will probably take these ideas with me forever.”

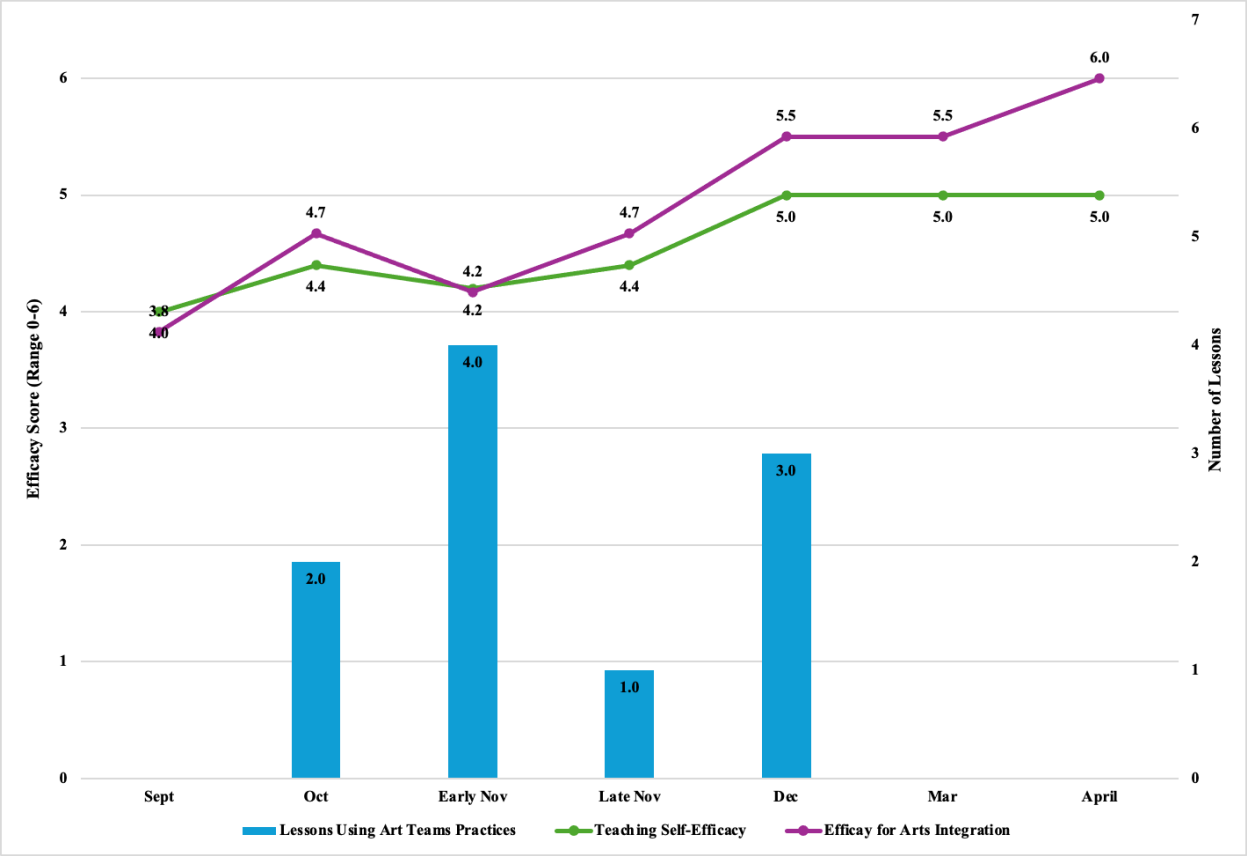

Figure 4. Efficacy Scores and Number of Lessons for Nicholas

Discussion

The findings from this study of teachers implementing arts-integrated curriculum over a two-year professional learning program both confirm and extend previous research in several key areas. Our findings strongly support Marshall's (2014) assertion that arts integration creates a conceptual and methodological space where students engage in complex meaning making. This was particularly evident in Amelia's classroom, where students collaborated and "met with the teacher individually to make their process visible." The emphasis on making thinking visible aligns with Marshall's framework of arts integration as transcending disciplinary boundaries. The extensive journaling in Amelia's class that "decreased students' anxiety about embarking on a creative process" demonstrates how arts integration can foster the development of holistic and flexible learners as Marshall proposed.

The implementation observed across the three teachers' classrooms reflected varying integration approaches identified in Bresler's (1995) framework. Max's work with public art murals exemplified the co-equal cognitive approach, where arts integration required higher-order thinking and aesthetic engagement. In contrast, Nicholas's initial approach with the pumpkin unit more closely resembled the subservient approach, where arts served as an add-on element. However, his progression toward using visual notetaking for learning about the American West showed movement toward a more cognitively complex integration approach. This evolution supports Bresler's contention that there is diversity in how teachers interpret and implement arts integration but also suggests that sustained professional learning can help teachers move from subservient to more cognitively complex integration styles.

The study findings strongly align with Darling-Hammond et al.'s (2017) emphasis that arts-integrated professional learning is most effective when job-embedded and sustained over time. All three teachers demonstrated a progression in their implementation of arts integration practices throughout the program, with increasing sophistication and confidence. This was particularly evident in Nicholas's case, whose efficacy for arts integration increased by two whole points as he implemented journaling and adjusted his approach based on student responses. The teachers' reflections also support Burnaford et al.'s (2007) view that effective professional learning emphasizes teacher agency and contextual responsiveness. Max's realization about "slowing down the processes in his classroom to allow for greater student agency" illustrates how the Art TEAMs program facilitated reflective practice rather than prescriptive implementation.

The documented increases in self-efficacy and arts integration efficacy across all three teachers support Beswick et al.'s (2016) findings linking professional learning to improvements in teaching quality and teacher beliefs. Amelia maintained consistently high efficacy for arts integration while focusing on refinement, while both Max and Nicholas showed significant growth in efficacy measures. This suggests that the professional learning program addressed what Rooney (2004) identified as key challenges: limited confidence in artistic abilities and difficulty aligning arts-based strategies with academic content.

The findings strongly support Vangrieken et al.'s (2017) research on the importance of professional learning communities in sustaining arts-integrated practices. All three teachers reported feeling valued within the Art TEAMs community, with Amelia specifically noting that the program "helped her regain the feeling that teaching is important work." Max similarly reported "feeling a sense of belonging in the Art TEAMs group." This aligns with Vangrieken's characterization of effective PLCs as offering supportive environments for collective engagement.

The study highlights how time management represents a significant challenge in implementing arts integration, a factor less emphasized in previous literature. Both Amelia and Nicholas noted challenges with timing, with Nicholas specifically mentioning that implementing a new curriculum simultaneously made arts integration more challenging. This suggests that professional learning models should explicitly address temporal constraints. While Liao (2016) connected creativity with integrated learning, our findings specifically highlight student agency as a core outcome. Max intentionally structured his classroom to "allow for greater student agency," and Nicholas reported his students "became more joyful, had freedom in the classroom." This suggests that arts integration may be particularly valuable for fostering student autonomy.

Art TEAMs' Practices in a Middle School Special Education Classroom

The following is an excerpt from a chapter in print.

Re-imagining special education through arts-centered learning: A case study of a lesson on metacognition using the creative research stages with exceptional learners.

Using a case study approach, we explored the Learning Lab, a carefully tailored space for rural middle school students with diverse learning needs. In the space, the teacher pioneered a strengths-based model leveraging art-based practices to uncover student learning. The Learning Lab approach uses the arts-practice as research pedagogy described by Marshall and D'Adamo

(2011, 2018) and centers it on students with special needs. This case study provides an in-depth analysis of the curriculum, implementation, and student outcomes, creating a rich understanding by focusing on context, nuance, and real-world complexity. Reflections, observations, and artifact analysis highlight the interplay of art, learning, and identity within a rarely studied context of rural special education classrooms.

Lesson Learned

The curriculum in the Learning Lab guided learners to craft "metacognitive visual metaphors" using various media, from artificial intelligence to recycled materials. Grounded in constructionist theory (Ali et al., 2019) and art-centered learning, students began seeing art-centered thinking as their work in the classroom, providing a concrete purpose to their time in school. As students explored their mental landscapes, they developed a nuanced understanding of their own cognitive processes and redefined their relationship to learning.

This project leveraged contemporary artmaking practices as a tool to construct a new paradigm in my special education classroom. As students engaged in the project, they began constructing their understanding of their new strengths-based metacognitive processes. As students engaged in the Creative Research Stages, they became more deeply connected to their metaphor. As their artwork materialized, so did a richer self-love of their minds. When students requested their projects to be sent to teachers, they took ownership of their learning in an unprecedented way. This student-request was such a simple but powerful moment of self-advocacy. Starting the school year with this activity has allowed the students, myself, and my colleagues to have a shared language when discussing how to best accommodate or support students based on their unique learning needs.

This project had a positive impact on students' self-determined behavior as evidenced by their actions including 1: persevering through a new way of learning where they were positioned as the drivers of their educational experience 2. inviting stakeholders with educational authority into the Exhibition of Learning to view their vulnerable artworks 3: self-advocating that their projects be sent to teachers with the same validity as their SPED paperwork. Making their ways of thinking visible helped students see thinking as poetic, engaging, empowering, and beautiful. Each student/artist acquired tools to better understand and advocate for their unique mental landscapes. Artmaking empowered students to engage in self-advocacy, embrace their unique mental processes, and challenge a system that traditionally enforces cognitive conformity. Students actively construct their understanding of the world and can understand themselves more deeply through artistic production. This transformative approach highlights the possibilities of reimagining special education through a strengths-based lens. Giving value to cognition in this fundamental way led the students to a liberating revelation: everyone has a unique and valuable way of thinking.

Impact of Art TEAMs Curriculum on Teacher Practice

Presence of Art TEAMs Elements

Throughout the observations of classrooms, we looked for evidence of ten specific Art TEAMs elements. Figures 5 and 6 show the presence of specific Art TEAMs elements in art and generalist classrooms. "Evidence in Use" includes times when the students were actively engaged in this element. "Evident in Student Products" means the making process of students showed specific elements. "Evident in Teacher Talk Only" means that teachers mentioned the

element but did not complete an activity that included said element. "No Evidence" means the element was not found in the classrooms.

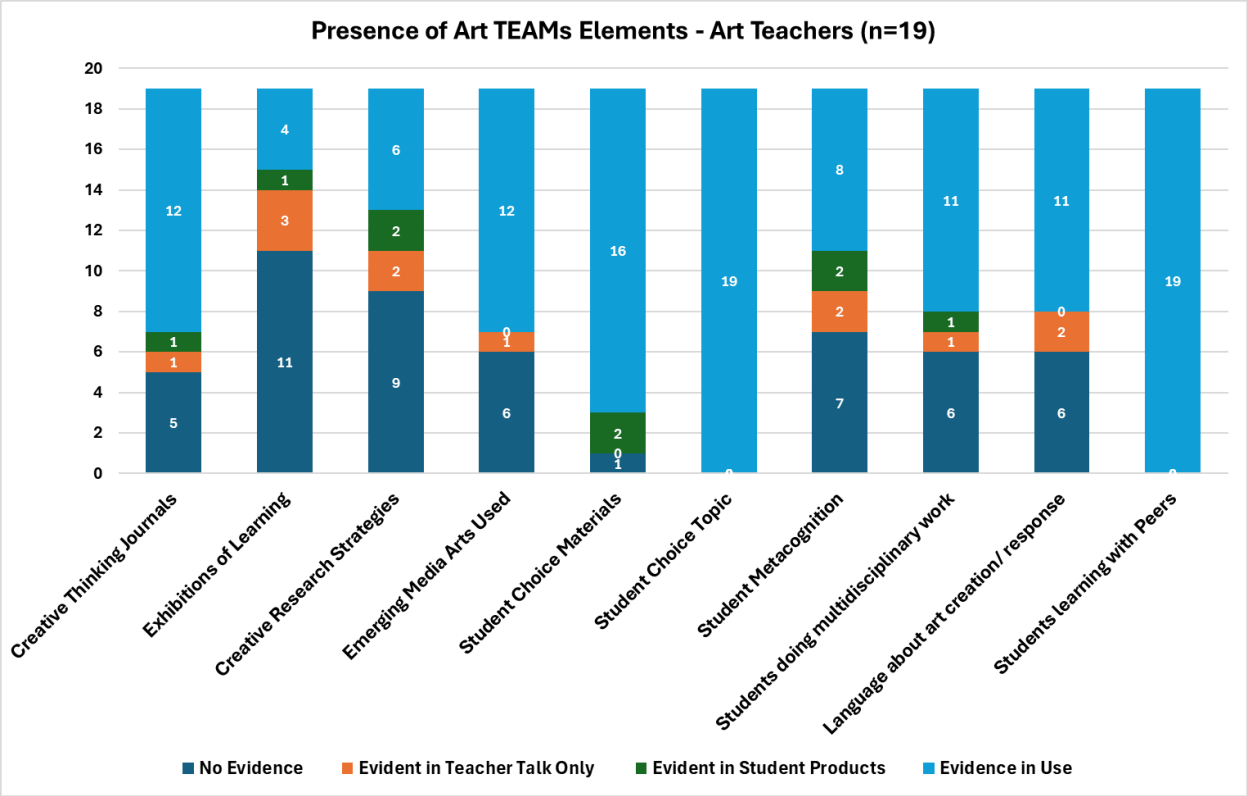

Figure 5. Presence of Art TEAMs Elements – Art Teachers

In the 19 observations of art classrooms, all ten elements were found. The elements found most often in the "Evidence in Use" category were students learning with peers and student choice topic, both with 19 instances. There were 0 elements that had no "Evidence in Use", but exhibitions of learning and creative research strategies had the least instances with 4 and 6 respectively. The "Evident in Student Products" category was not found often, but three elements, creative research strategies, student choice materials, and student metacognition, each had two instances. Student choice materials, student choice topic, and student learning with peers had 0 instances in the "Evident in Student Products" category. The element found most often in the "Evident in Teacher Talk Only" category was exhibitions of learning with three instances. Emerging media arts used, student choice topic, language about art creation/response, and student learning with peers had 0 instances in the "Evident in Teacher Talk Only" category. There were several elements that fell into the "No Evidence" category. The elements with the most instances included exhibitions of learning (11) and creative research strategies (9). Two elements, student choice topic and student learning with peers did not fall into the "No Evidence" category.

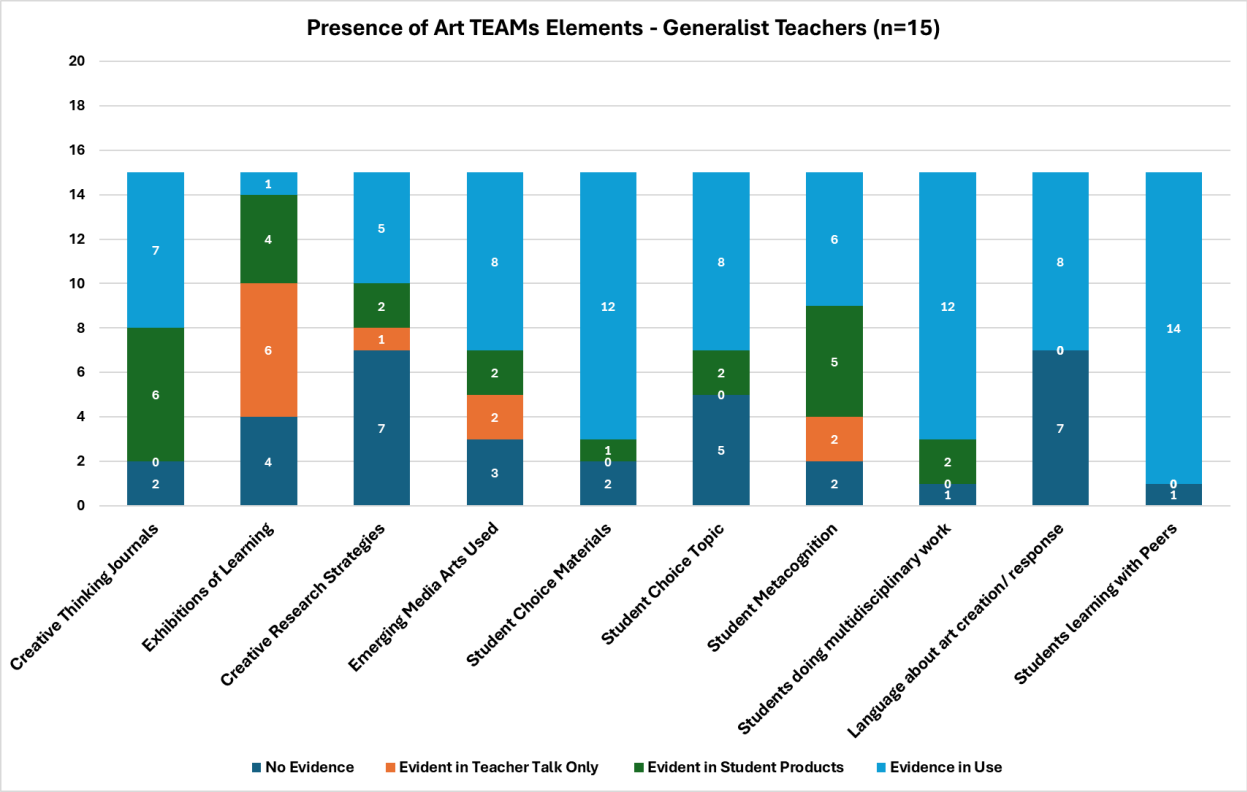

Figure 6. Presence of Art TEAMs Elements – Generalist Teachers

In the 15 observations of generalist classrooms, all ten elements were found. The elements found most often in the "Evidence in Use" category were students learning with peers (14 instances), students doing multidisciplinary work (12 instances), and student choice materials (12 instances). There were 0 elements that had no "Evidence in Use", but exhibitions of learning had the least instances with 1. The elements found most often in the "Evident in Student Products" category were student metacognition (5 instances) and creative thinking journals (6 instances). Language about art creation and response and student learning with peers had 0 instances in the "Evident in Student Products" category. The element found most often in the "Evident in Teacher Talk Only" category was exhibitions of learning with 6 instances. Creative thinking journals, student choice materials, student choice topic, students doing multidisciplinary work, language about art creation/response, and student learning with peers had 0 instances in the "Evident in Teacher Talk Only" category. There were several elements that fell into the "No Evidence" category. The elements with the most instances included creative research strategies and language about art creation/response, both with 7 instances. All 10 elements had at least one instance in the "No Evidence" category.

Overall, both art and generalist classrooms displayed student choice materials and student learning with peers in almost every observation. There were more instances of exhibitions of learning in generalist classrooms. There were more instances of student choice topic in art classrooms. There was a similar lack of the elements creative research strategies and language about art creation and response in both art and generalist classrooms.

Impacts of Art TEAMs Based on Teachers' Instructional Logs

Cohort 1 Teachers

From Fall 2024 to Spring 2025, Cohort 1 teachers completed the instructional log survey three times, which assessed their planning and implementation of Art TEAMs practices in their lessons. A total of 22 responses were collected on the following dates: October 26, 2024; February 8, 2025; and March 29, 2025. Of these, nine responses came from art teachers, and 13 responses came from generalist teachers, across the three dates. On October 26, 2024, 7 teachers responded to the survey, including three art teachers and four generalist teachers. Participation increased to eight teachers on February 8, 2025, with three art teachers and five generalist teachers responding. On March 29, 2025, nine teachers attended the session, but only seven responded to the survey- three art teachers and four generalist teachers. Two teachers did not complete the instructional log survey because they did not have relevant teaching practices to report.

Figures 7 and 8 display results from questions answered by art teachers. Figure 7 shows the average number of times art teachers saw their target class. Figure 8 presents the average number of lessons completed by art teachers using Art TEAMs practices. The average number of times Cohort 1 art teachers saw their target classes remained relatively stable between October 2024 and February 2025. However, in March 2025, there was a significant decline, with the average dropping from 8.7 to 5.7. A similar pattern was observed in the average number of lessons dedicated to using Art TEAMs practices, which also decreased from 8.7 to 5.7 in March 2025.

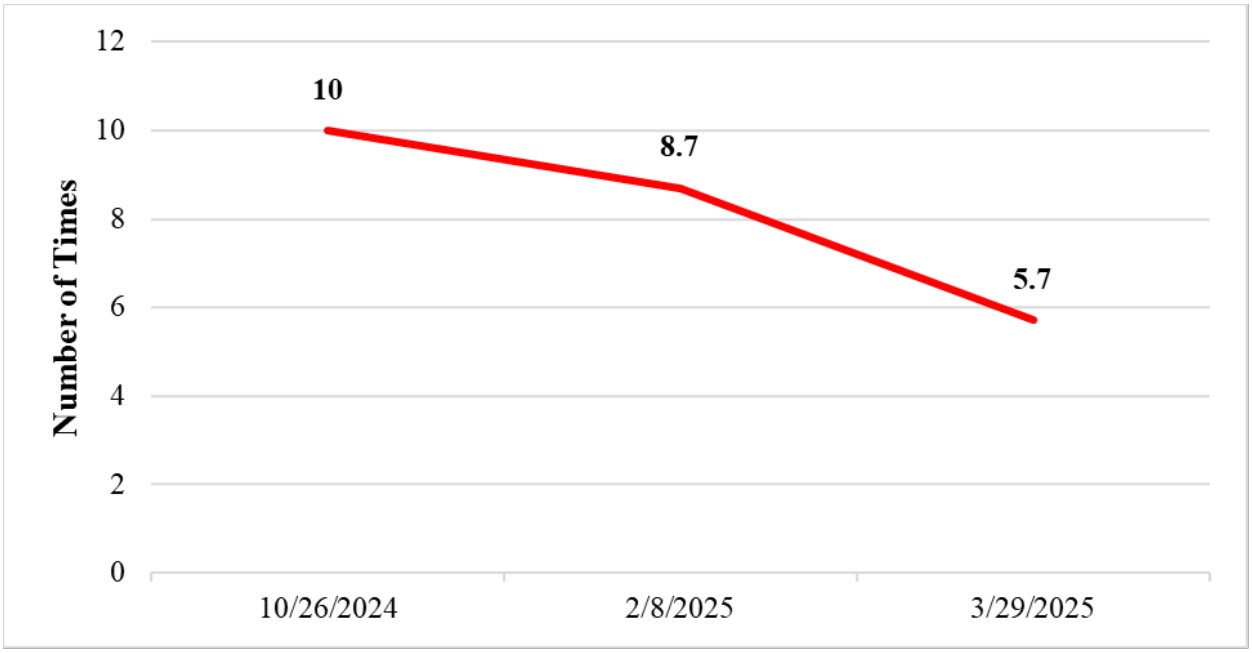

Figure 7. Cohort 1 Art Teachers – Average Number of Times Seeing Target Class

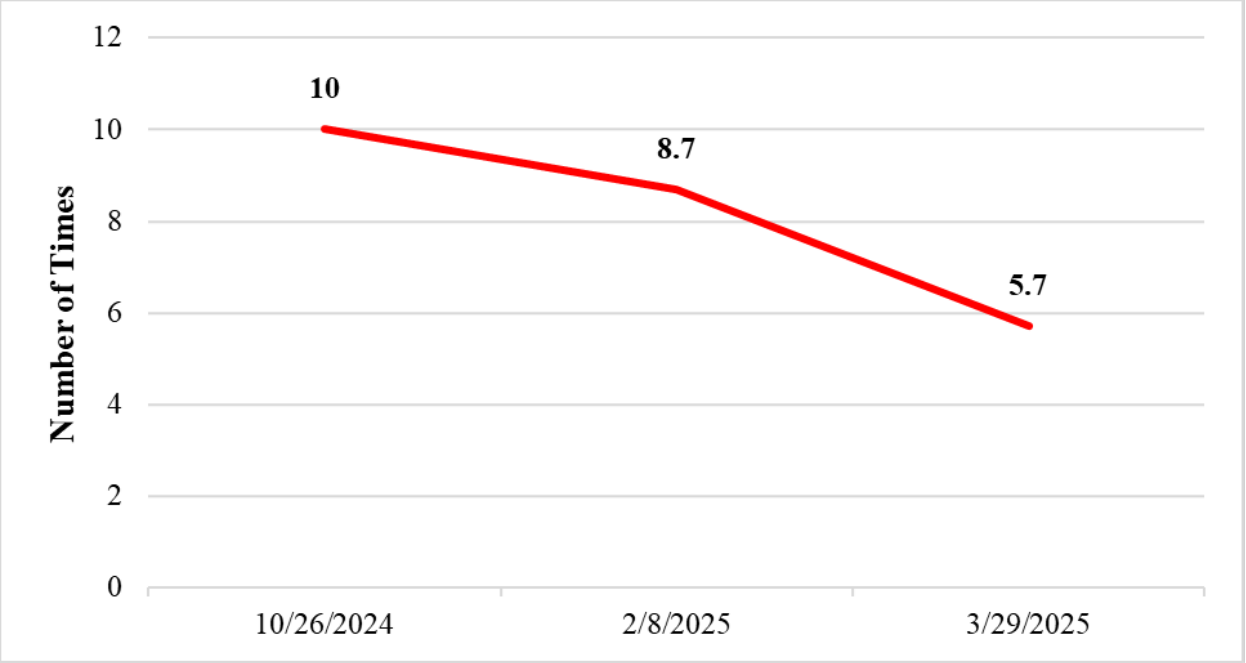

Figure 8. Cohort 1 Art Teachers- Average Number of Lessons using Art TEAMs Teaching Practice

Figures 9 and 10 show results from questions answered by generalist teachers. Figure 9 illustrates the average number of lessons with Art TEAMs principles that generalist teachers planned to try with their classes, while Figure 10 shows the average number of such lessons they successfully implemented.

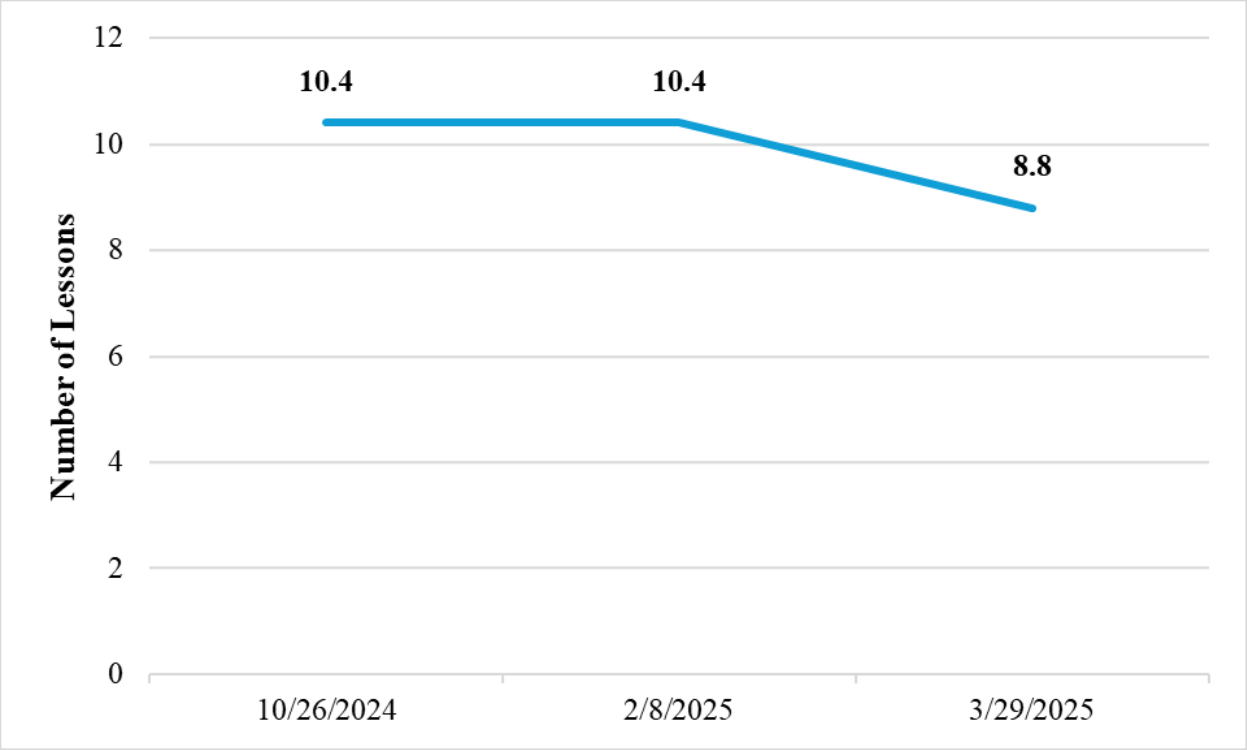

Figure 9. Cohort 1 Generalist Teachers- Average Number of Art TEAMs Lessons Planned to Try

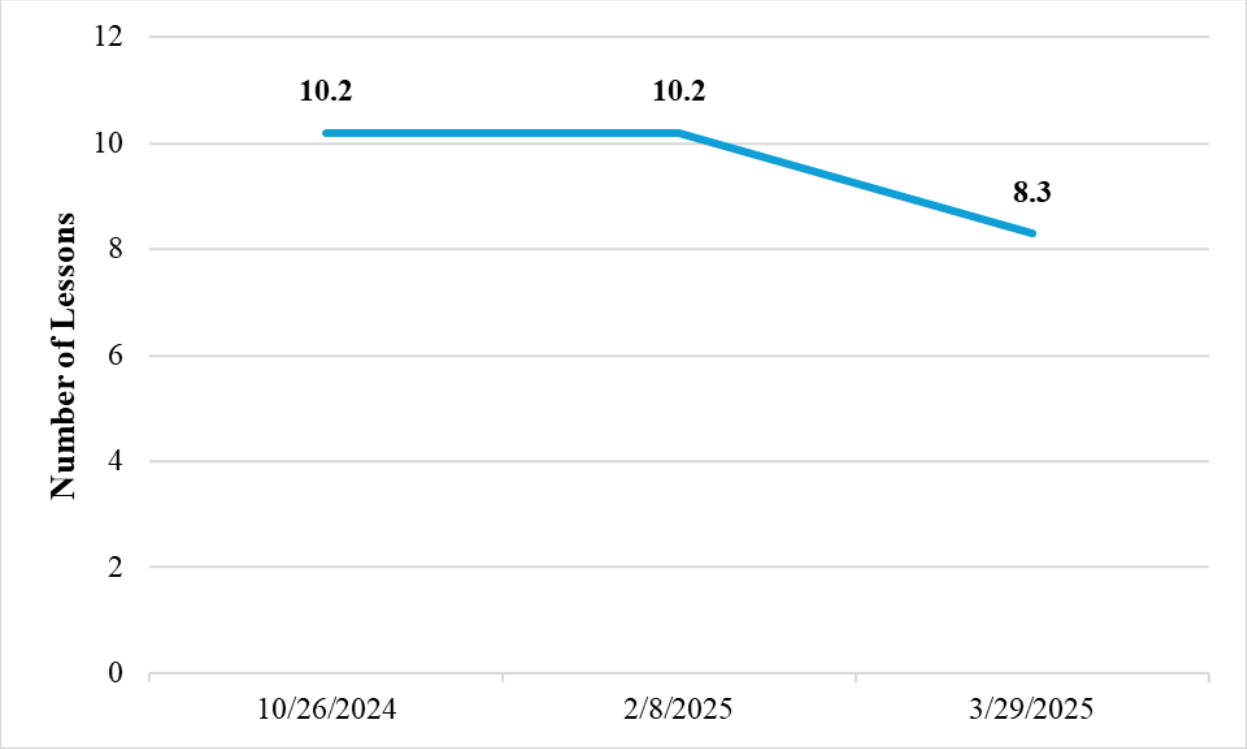

Figure 10. Cohort 1 Generalist Teachers- Average Number of Art TEAMs Lessons Executed

From Fall 2024 to Spring 2025, Cohort 1 generalist teachers showed consistent averages in both planning and executing Art TEAMs lessons through October 26, 2024, and February 8, 2025. Specifically, teachers planned an average of 10.4 lessons and executed an average of 10.2 lessons at both time points. However, by March 29, 2025, both measures experienced noticeable declines. The average number of lessons planned to try dropped to 8.8, while the average number of lessons executed fell to 8.3. This parallel decrease suggests that not only were fewer lessons being implemented, but teachers were also planning fewer lessons in spring.

Figures 11 and 12 summarize responses from both art and generalist teachers in Cohort 1. Figure 11 shows the average amount of time (in hours) teachers spent planning and researching their Art TEAMs lessons. Figure 12 displays the average amount of time (in hours) teachers dedicated to reviewing, reflecting on, and revising their Art TEAMs lessons.

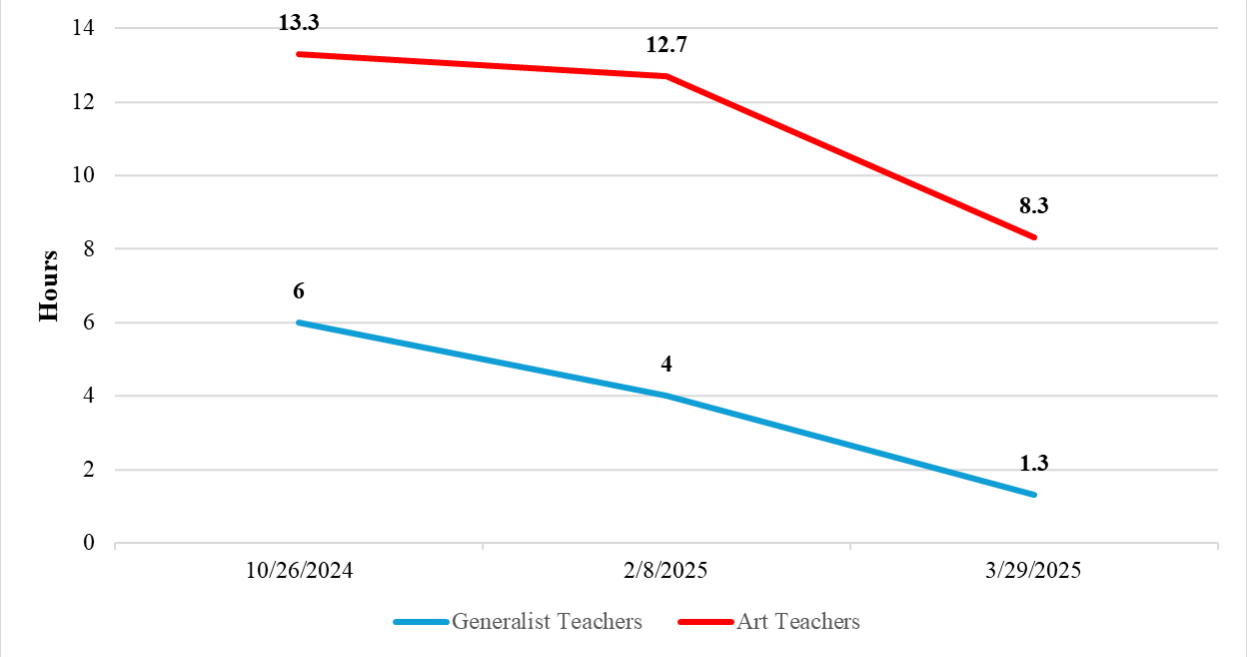

Figure 11. Average Amount of Time Committed to Planning and Researching Art TEAMs Lessons by Cohort 1 Teachers

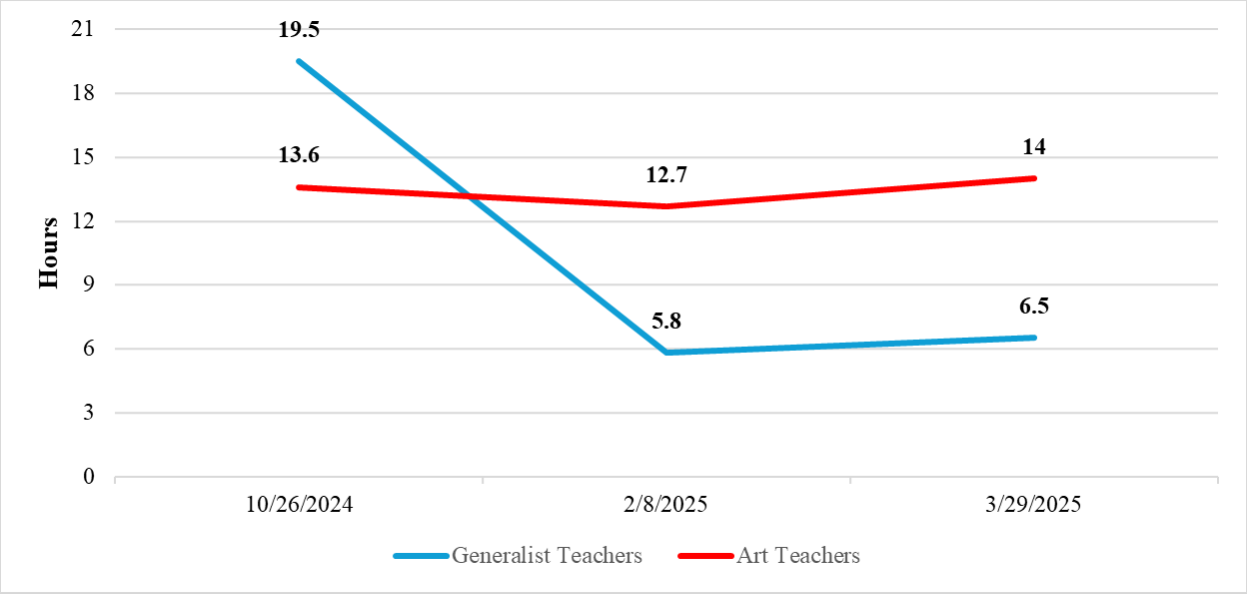

Figure 12. Average Amount of Time Committed to Reviewing, Reflecting, and Revising Art TEAMs Lessons by Cohort 1 Teachers

In March 2025, both art and generalist teachers in Cohort 1 saw a decline in the average time spent planning and researching integrated instruction compared to October 2024 and February 2025. Generalist teachers experienced the sharpest drop, from 6 hours in October 2024 to just 1.3 hours in March 2025. Art teachers also decreased their planning time, from 13.3 to 8.3 hours over the same period. When it came to reviewing, reflecting, and revising, generalist teachers showed a significant drop from 19.5 hours to 5.8 hours and then slightly increased in March 2025 from 5.5 hours to 6.5 hours. Art teachers reported a more stable trend in reflection time, with a small increase from 12.7 to 14 hours between February 2025 and March 2025.

Overall, while both groups of Cohort 1 reduced their time spent on planning and researching by March 2025, art teachers continued to spend more time than generalists across both phases of integrated instruction. The data suggests a potential shift in focus, with generalist teachers investing slightly more time in reflection even as their planning time declined sharply, possibly due to external demands such as spring testing or competing instructional priorities.

Cohort 2 Teachers

Between October 2024 and March 2025, Cohort 2 teachers were asked to complete instructional log surveys eight times, reporting the planning and implementation of Art TEAMs practices in their lessons. Throughout Fall 2024, responses were recorded on the following dates: October 12, October 26, November 16, and December 7. In Spring 2025, responses were collected on January 25, February 8, March 1, and March 29. A total of 50 survey responses were submitted by art teachers and 84 by generalist teachers across these eight dates.

On October 12, 2024, 15 teachers responded to the survey, including five art teachers and 10 generalist teachers. Participation increased to 18 teachers on October 26, 2024, with seven art teachers and 11 generalist teachers. On November 16, 2024, 16 teachers responded, including five art teachers and 11 generalist teachers. On December 7, 2024, 18 teachers participated, comprising seven art teachers and 11 generalist teachers. On January 25, 2025, 18 responses were recorded from seven art teachers and 11 generalist teachers. On February 8, 2025, the same

number of responses were received, again from seven art teachers and 11 generalist teachers. By March 1, 2025, 16 teachers responded, including six art teachers and 10 generalist teachers. On March 29, 2025, 17 responses were received, comprising seven art teachers and 10 generalist teachers.

Figures 13 and 14 show results from questions that were asked to art teachers. Figure 13 shows the average number of times that Cohort 2 art teachers saw their target class. Figure 14 shows the average number of lessons completed by Cohort 2 art teachers using Art TEAMs practices. For cohort 2 art teachers, the average number of times they saw their target classes remained relatively stable through February 2025, peaking at 6.4. However, this number dropped significantly on March 1,2025, to 4.3, before slightly increasing to 4.6 on March 29,2025. The average number of lessons using Art TEAMs teaching practices reported by Cohort 2 art teachers fluctuated across time points. On October 12, 2024, teachers reported an average of 3.2 lessons. By October 26, 2024, this number increased significantly to 5.4, the highest recorded value during the period. However, on November 16, 2024, the number of lessons dropped to 2.4. On December 7, 2024, the average increased again to 4.6 before declining to 3.5 on January 25, 2025. A second peak was observed on February 8, 2025, when the average reached 5.0. This was followed by another drop to 3.5 on March 1, 2025. By March 29, 2025, the average rose slightly to 3.9.

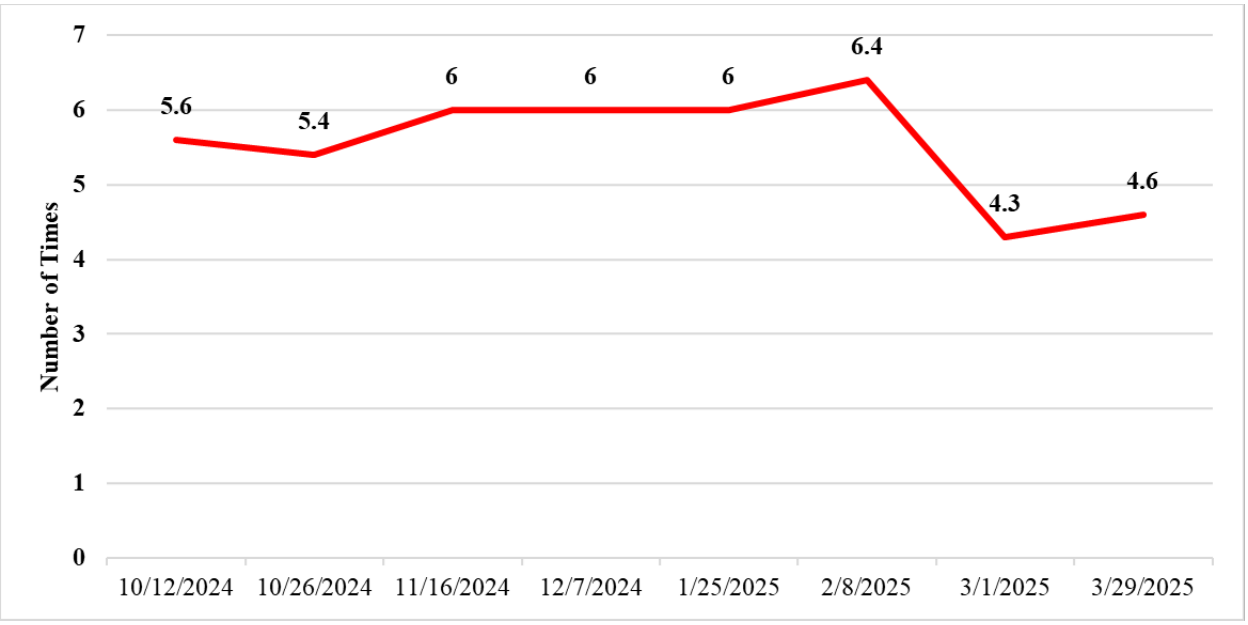

Figure 13. Cohort 2 Art Teachers- Average Number of Times Seeing Target Class

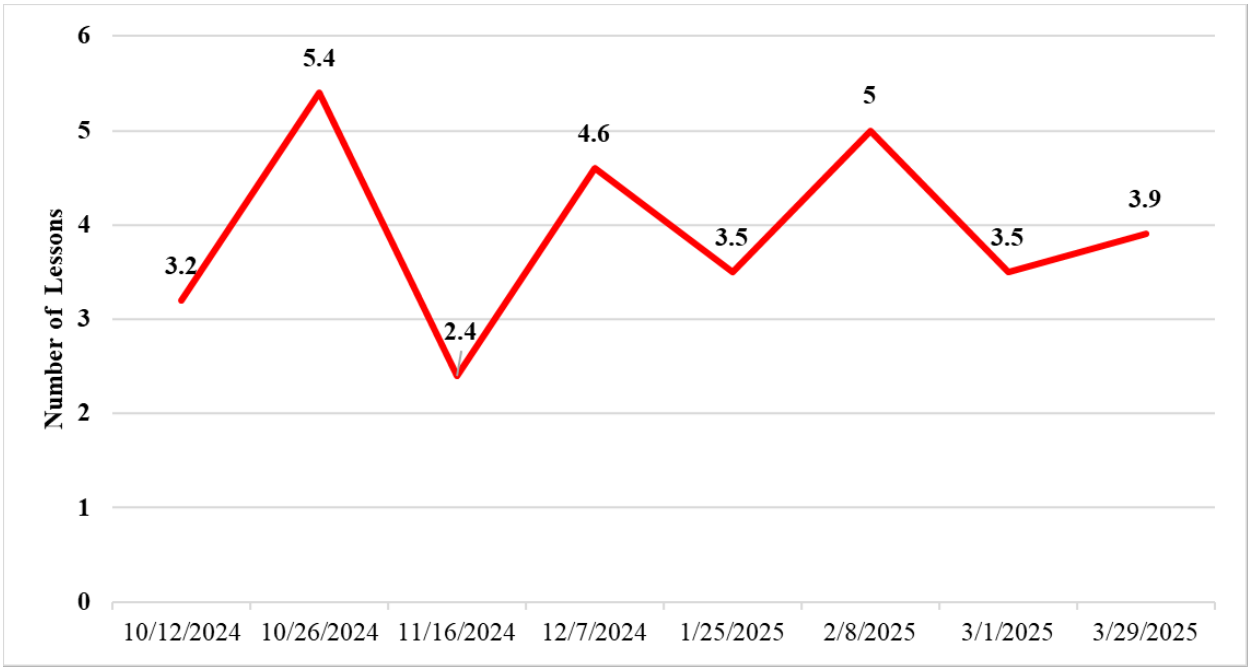

Figure 14. Cohort 2 Art Teachers- Average Number of Lessons using Art TEAMs Teaching Practices

This pattern suggests that while art teachers consistently implemented Art TEAMs practices, there were notable variations in the frequency of lesson use. Peaks in late October and early February may reflect periods of high instructional engagement or alignment with planning cycles. In contrast, declines in mid-November, late January, and early March may be related to holiday schedules, weather, or other instructional demands.

Figures 15 and 16 show results from questions that were asked to Cohort 2 generalist teachers. Figure 15 shows the average number of lessons with Art TEAMs principles that generalist teachers planned to try with their class. Figure 16 shows the average number of lessons with Art TEAMs principles that Cohort 2 generalist teachers executed successfully with their class.

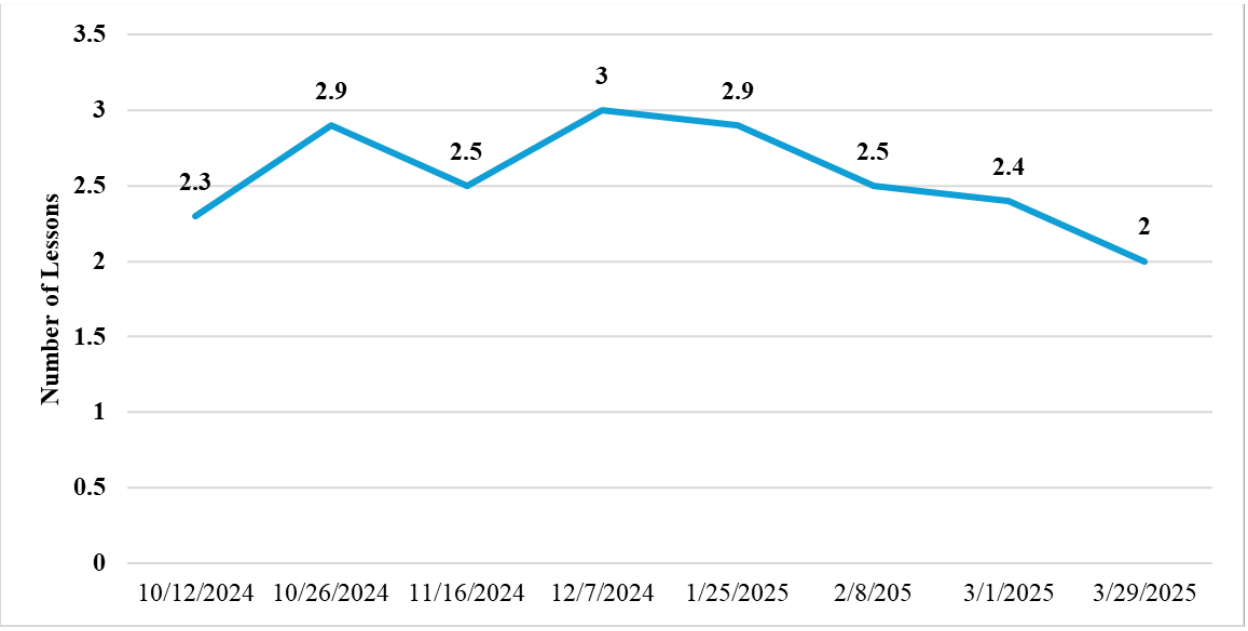

Figure 15. Cohort 2 Generalist Teachers- Average Number of Art TEAMs Lessons Planned to Try

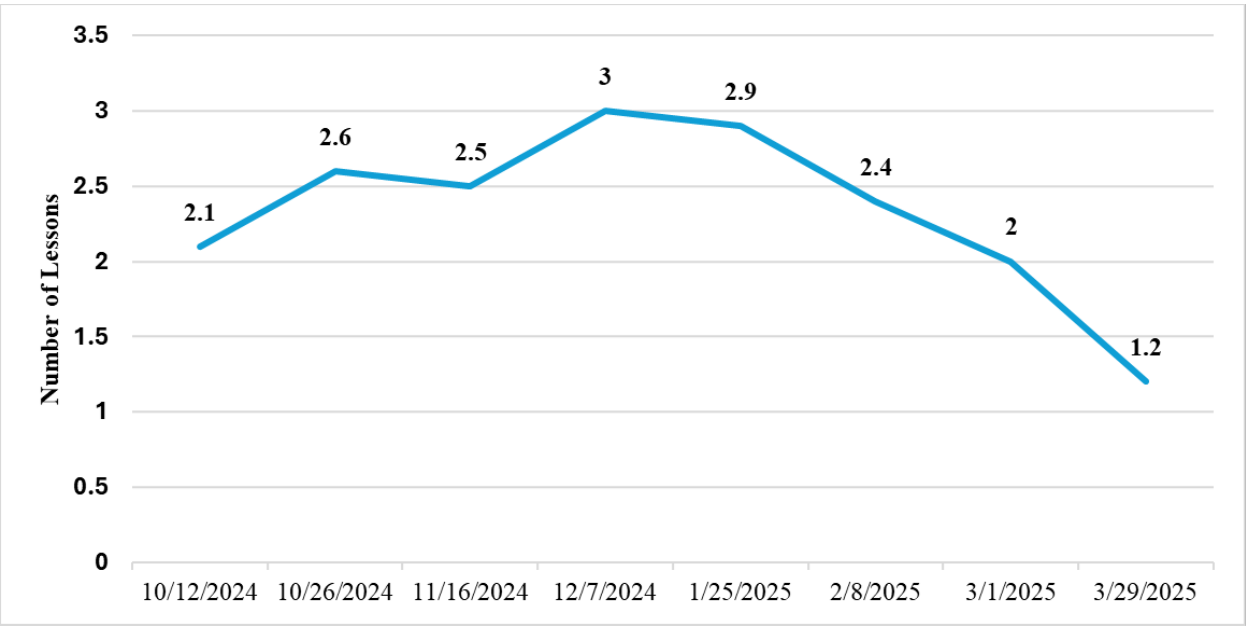

Figure 16. Cohort 2 Generalist Teachers- Average Number of Art TEAMs Lessons Executed

Figures 17 and 18 show results from questions answered by art and generalist teachers. Figure 17 shows the average amount of time (in hours) that teachers dedicated to planning and researching their Art TEAMs lessons. Figure 18 shows the average amount of time (in hours) that teachers dedicated to reviewing, reflecting on, and revising their Art TEAMs lessons. For generalist teachers in Cohort 2, the average number of Art TEAMs lessons planned to try showed a peak of 3.0 on December 7, 2024, after a steady increase from 2.3 on October 12 to 2.9 on October 26. This was followed by a slight dip to 2.5 on November 16, then a recovery to 2.9 on January 25, 2025. From February 8 onward, the average gradually declined to 2.4 on March 1

and reached 2.0 on March 29, 2025. A similar trend was observed in the executed lessons. Generalist teachers reported an average of 2.1 executed lessons on October 12, 2024, which steadily increased to a peak of 3.0 by December 7. After that, the number of lessons declined gradually. Dropping to 2.9 on January 25, 2025, then to 2.4 on February 8, and 2.0 on March 1 before reaching the lowest point of 1.2 on March 29, 2025.

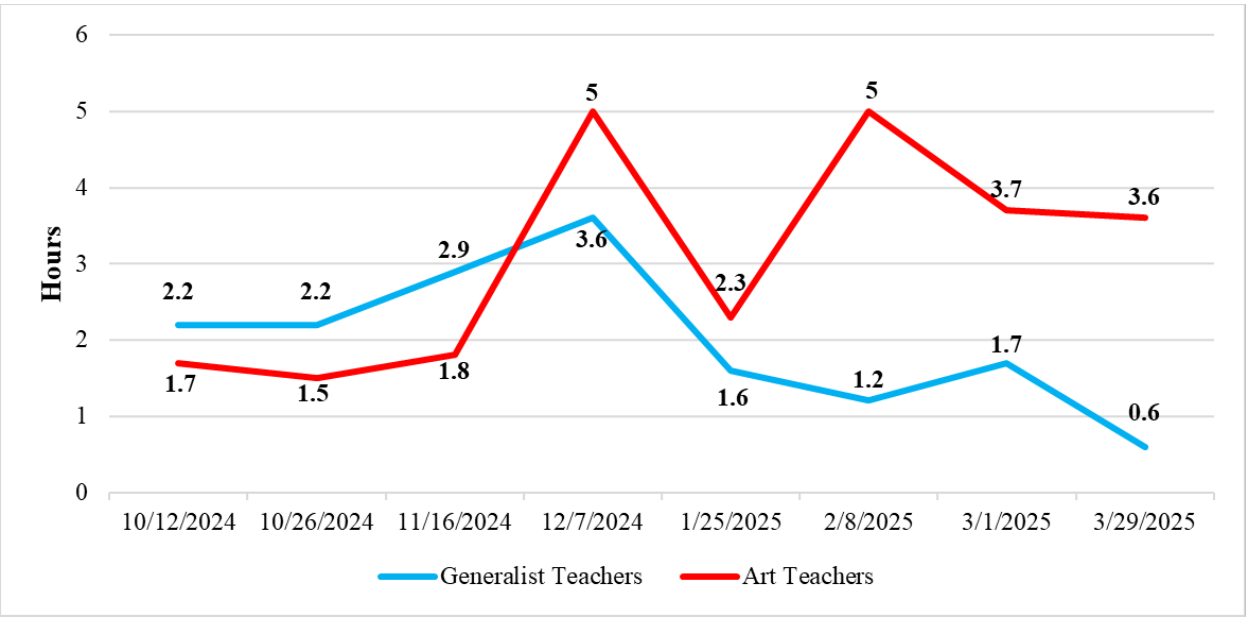

Figure 17. Average Amount of Time Committed to Planning and Researching Art TEAMs Lessons

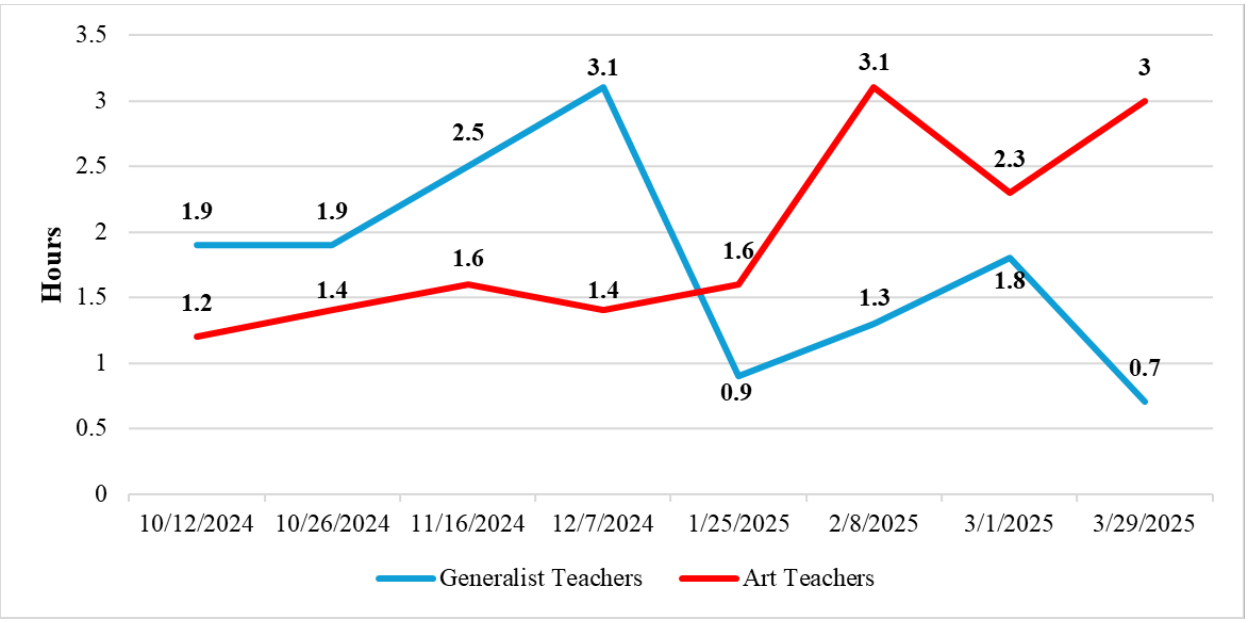

Figure 18. Average Amount of Time Committed to Reviewing, Reflecting, and Revising Art TEAMs Lessons

In planning and researching integrated instruction (Figure 17), generalist teachers showed a gradual increase in time commitment through December 2024, followed by a consistent decline from spending from January to March 2025 –from 3.1 hours to just almost half an hour. Art teachers demonstrated a different pattern, with planning time doubling in both December 2024 and February 2025, suggesting periods of intensified preparation. Although their planning time also declined by March 2025, it remained much higher than that of generalist teachers throughout the reporting period.

In reviewing, reflecting, and revising integrated instruction (Figure 18), generalist teachers peaked in December 2024 but saw a sharp decline in early 2025, with only a brief recovery before reaching their lowest levels in March 2025. In contrast, art teachers showed a steady increase in reflection time from October 2024 through March 2025. This suggests that while generalist teachers gradually reduced their engagement in reflection activities, art teachers became more invested in reviewing and refining their lessons during the second half of the school year. Overall, art teachers reported spending more time on planning and researching than generalist teachers, while generalist teachers spend more time on reviewing, reflecting, and revising lessons than art teachers.

January 25, 2025, then to 2.4 on February 8, and 2.0 on March 1 before reaching the lowest point of 1.2 on March 29, 2025.

Impacts of Art TEAMs Based on the RAMOS Rubric

Figures 19, 20, and 21 show results obtained from the RAMOS observation form. The RAMOS rubric focuses on Classroom Organization, Student Engagement, and Classroom Interactions. In each category, we compare the average time spent by all teachers, art teachers, and generalist teachers.

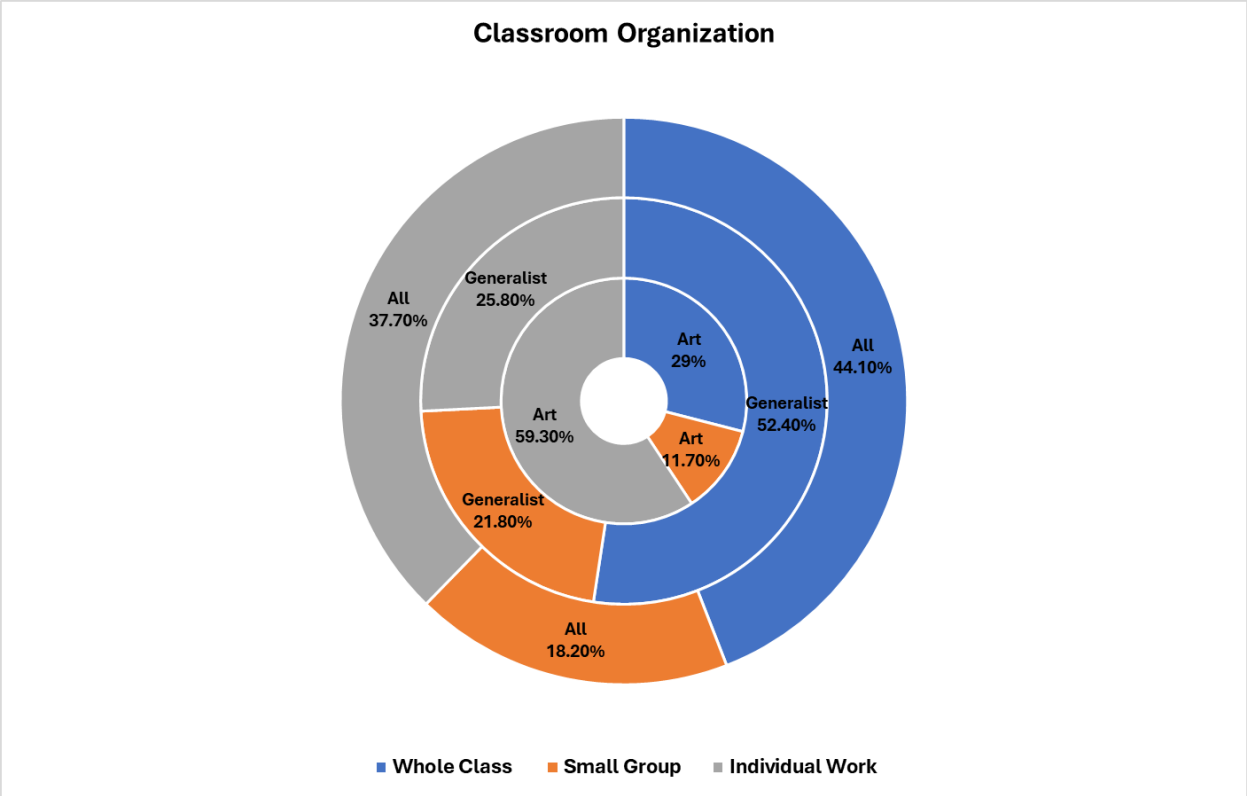

Figure 19. Percentage of Time Spent in each Classroom Organization

Generalist teachers spent the greatest amount of time in the whole class organization, followed by individual work then small group. Art teachers spent the greatest amount of time in the individual work organization, followed by whole class and small group. Overall, teachers spent most of their time on the whole class organization, followed by individual work and small group. Art teachers spent over twice as much time on individual work. These teachers are likely giving students time to work on their projects.

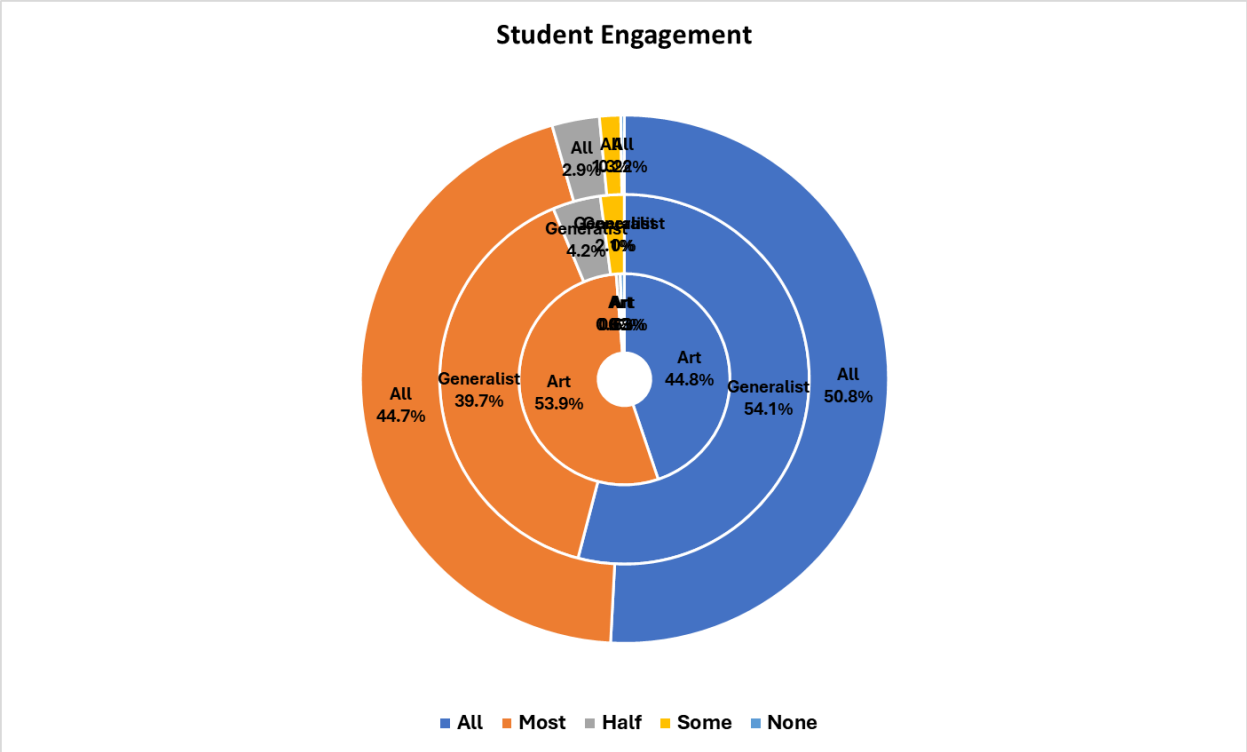

Figure 20. Percentage of Time Spent in each Student Engagement Type

	All	Most	Half	Some	None
Art Teacher	44.8%	53.9%	0.63%	0%	0.63%
Generalist Teacher	54.1%	39.7%	4.2%	2.1%	0%
All Teachers	50.8%	44.7%	2.9%	1.3%	0.22%

Generalist teachers spent the greatest amount of time engaging all the class, followed by most of the class (93.8% total). Very little time was spent engaging half and some of the class and zero time was spent engaging none of the class. Art teachers spent the greatest amount of time engaging most of the class, followed by all the class (98.7% total). Very little time was spent engaging half and none of the class, and zero time was spent engaging some of the class. Overall, teachers spent the greatest amount of time engaging all the class, followed by most of the class (95.5% total). Little time was spent engaging half, some, and none of the class. The focus on all students is likely to improve the learning environment.

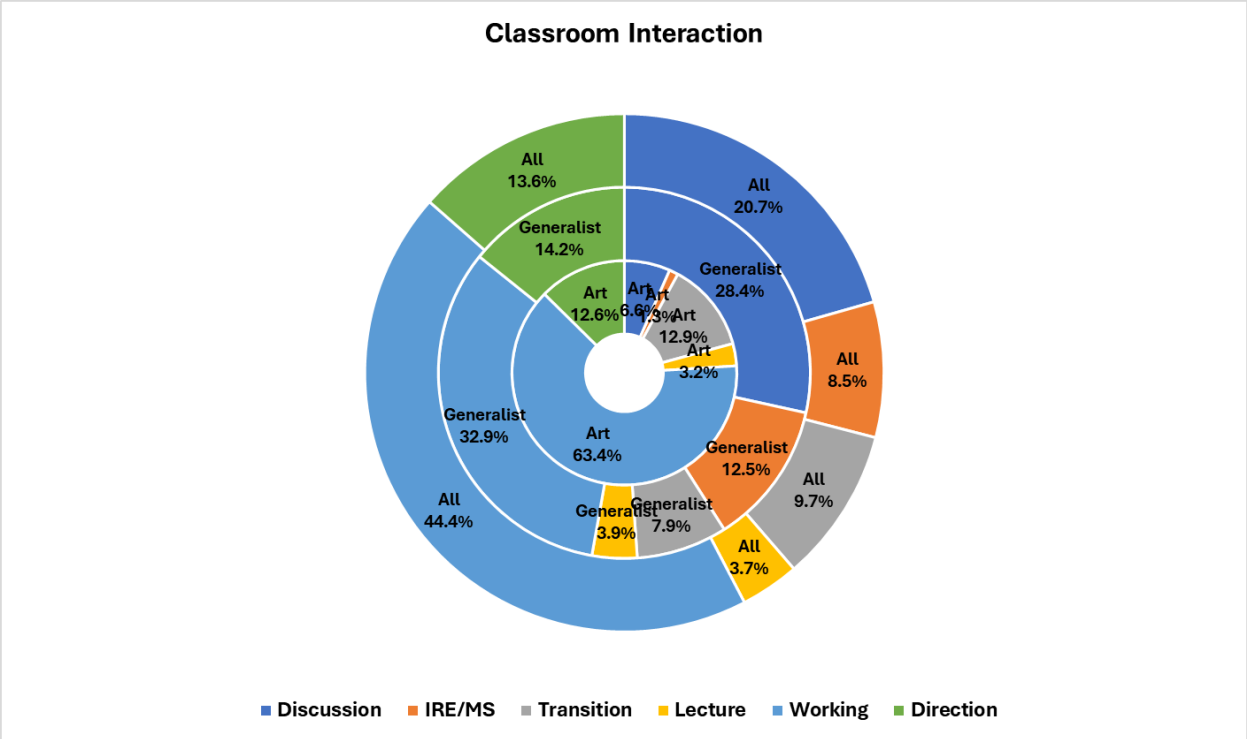

Figure 21. Percentage of Time Spent in each Type of Classroom Interaction

	Discussion	IRE/MS	Transition	Lecture	Working	Direction
Art Teacher	6.6%	1.3%	12.9%	3.2%	63.4%	12.6%
Generalist Teacher	28.4%	12.5%	7.9%	3.9%	32.9%	14.2%
All Teachers	20.7%	8.5%	9.7%	3.7%	44.4%	13.6%

Generalist teachers spent the greatest amount of time working, followed by discussion (61.3% total). They spent almost equal amounts of time in IRE/MS and direction. Generalist teachers spent the least amount of time in transition and lecture. Art teachers spent most of their time working. They spent almost equal amounts of time in transition and direction. Art teachers spent little time on discussion, lecture, and IRE/MS. Overall, teachers spent the greatest amount of time working, followed by discussion (65.1% total). The next greatest amounts of time were spent in direction, transition, and IRE/MS. Little time was spent overall on lecture. Generalist teachers spend far more time on discussion and IRE/MS than art teachers, most likely as they are working to integrate Art TEAMs principles into their classrooms.

Summary

The analysis of classroom observations focusing on the Art TEAMs elements showed that both art and generalist teachers were successful in incorporating these elements into their teaching, albeit with some variations. Art teachers frequently utilized elements like peer learning and student choice, while generalist teachers emphasized multidisciplinary work and provided a variety of student engagement types. However, both groups showed a deficiency in implementing creative research strategies and language about art creation/response.

Art teachers had a consistent interaction with their target class throughout the semester, with a noted drop in December, which was reflected in the average number of lessons using Art TEAMs practices. Generalist teachers displayed more variability in their planning and execution of lessons, with a decrease noted from October to mid-November, followed by a slight increase in December. In terms of time investment, both art and generalist teachers spent less time on planning and researching as the semester progressed, with art teachers dedicating more time to this aspect than their generalist counterparts. However, when it came to reviewing, reflecting on, and revising lessons, the art teachers reported less time spent in early November, whereas generalist teachers reported more. Overall, art teachers dedicated more time to this reflective practice than generalist teachers. This is expected since generalist teachers have many other domains to plan for.

The RAMOS observation form highlighted that generalist teachers often used whole-class and individual work structures, while art teachers gave more time for individual work, possibly to allow for project work. In student engagement, generalist teachers more frequently engaged all students, and art teachers focused on engaging most of the class. As for classroom interactions, generalist teachers spent considerable time in discussion and IRE/MS (Initiation-Response-Evaluation/Multiple Participant Reponses) activities, suggesting a greater integration of Art TEAMs principles, whereas art teachers prioritized working time, for art making activities.

In conclusion, the results suggest that both art and generalist teachers are integrating Art TEAMs elements into their practice with varying degrees of success. The study indicates an overall positive trend in adopting these practices, with evidence of active student engagement and a focus on incorporating student choice. While there are areas that require further attention, such as creative research strategies, the dedication of teachers to the Art TEAMs approach is evident in their commitment to planning, executing, and reflecting on their lessons. The findings demonstrate a progressive shift towards more interactive and student-centered teaching, with potential for continued growth and development in the future.

Dissemination

Art TEAMs on Social Media

Art TEAMs has a growing presence on Instagram and Facebook. We post several times a week to both sites. The content ranges from "meet-the-team" highlights about our teacher-participants or the research team, to quotes from the teachers recorded during our sessions, to photos of Art TEAMs training being implemented across the schools and classrooms, and finally during presentations at conferences. We currently have 144 (21% increase) active followers on Instagram and 211 page "likes"/shares on Facebook (growth of 74%). We are seeing an upward trend monthly and have had 5800 views of our content since the beginning of the period.

Art TEAMs' Website

Artteams.unl.edu is the domain name of our website. The site includes information about the project, the PIs, the staff, and how to connect with us. We also have a link for recruitment that allows anyone interested in joining the opportunity to contact the team. Additionally, the website is filled with photos and videos of our teachers in their role as students in our sessions and images of Art TEAMs implementation in the teachers' classrooms. Our website traffic for the first six month included 1976 unique visitors for a total of 2961 visits.

Art TEAMs' Podcast

Art TEAMs produces a bi-weekly podcast that is available through most major streaming platforms, including Spotify and Apple Podcasts. We are averaging 39 listens and are working on increasing our audience through links from our social media and mentions in our followers' feeds. Our podcast is also available on our two YouTube channels (Art TEAMs and TechEdge), as well as Apple Podcasts and UNL Media Hub with a total of over 900 views (growth of 197%).

Art TEAMs' Conference Presentations

We presented at the Nebraska Art Teachers Association (NATA) conference in Lincoln and outside of Nebraska in National Conferences. Our sessions were very well attended.

Nebraska Art Teachers Association (NATA 2024)

Thinking wall: Transforming Classroom Walls into Dynamic Learning Spaces: Integrating Wonder Walls with Emerging Media Arts
Presenters: Megan Pitrat, Guy Trainin, Azadeh Hassani

Differentiating Creativity for Exceptional Learners
Presenters: Megan Pitrat, Guy Trainin

The Creative Research Stages: Scaffolding Student Voice and Creativity in the Art Classroom across Grades
Presenters: Melissa Sellers, Sarah Gabelhouse, Megan Pitrat, Maggie Elsener

Teacher as Researcher: Presenting an Experiment on Using Creative Research Journals in a Technique Based Art
Presenter: Kate Gracie

Coding for Artists
Presenter: Gretchen Larsen

2025 Nebraska Association of Teachers of Mathematics Pre-Professional and Early Career Conference

Creativity and Special Education
Presenter: Megan Pitrat

2025 Educational Service Unit-7 PD Conference

Mind Body Spirit-Framework
Megan Pitrat

2025 National Art Education Association (NAEA)

Differentiating Creativity for Exceptional Learners
Presenter: Megan Pitrat; Guy Trainin Kimberley D'Adamo

Implementing Creative Research Journals in the Art Room: A teacher's Perspective
Presenter: Kate Gracie, Maggie Elsener, Sarah Gabelhouse

Intro to Creative Coding: Be Your Own Video DJ
Presenter: Gretchen Larsen

2025 American Association of Colleges for Teacher Education (AACTE)

Making Thinking Visible: Creative Thinking Journals in Professional Learning
Presenters: Guy Trainin, Kimberley D'Adamo, Ryan Margheim, Amy Spilker, HyeonJin, Yoon.

AAE Annual Convening

Transforming Grant Reports into Podcasts with Notebook LM
Presenters: Guy Trainin, Kimberley D'Adamo, HyeonJin Yoon

2025 Nebraska Educational Technology Association (NETA)

Classroom Design in the Age of AI
Guy Trainin, Ryan Margheim, Megan Pitrat, Kimberley D'Adamo

2025 International Society for Technology in Education (ISTE)

Empowering Teachers through Emerging Media Arts
Guy Trainin, Azadeh Hassani, HyeonJin Yoon, Kimberley D'Adamo

Creativity Playground: Inquiry using Creative Journals
Presenter: Guy Trainin

2025 AERA

Weaving the Tapestry of Learning: Co-Creation and Emergence in Project's Curriculum Development
Presenters: Zohreh Tamimdari, **Guy Trainin**, Kimberley D'Adamo, HyeonJin Yoon

Teacher Agency and Empowerment Via Arts Integration: Classroom and Schoolwide Changes
Presenters: Guy Trainin, Azadeh Hassani, HyeonJin Yoon, Kimberley D'Adamo

Art TEAM's Awards

In 2024 Sarah Gabelhouse won the Elementary Art Educator award from the Nebraska Art Teacher Association

In 2023 Mellisa Sellers won the Spome Novice award from the Nebraska Art Teacher Association.

Acknowledgements

Art TEAMs is made possible by the individual and collaborative work of many individuals. A deep gratitude is extended to all who participated in the experience of teaching (and learning) with emerging media and arts, including cohort one teachers (Jessica Davis, Maggie Elsener, Sarah Gabelhouse, Kate Gracie, Sarah Holz, Sarah Kroenke, Ryan Margheim, Matt Auch Moedy, Megan Pitrat, Katie Samson, Melissa Sellers, Amy Spilker, Jessi Wiltshire) Cohort two teachers (Shera Baumel, Ethan Carlson, Kayla DeSersa, DeAnn Hanish, Brent Jarosz, Jen Liebenthal, Bailey Mason, Yvonne Meyer, Jennifer Hoss-Miller, Christina Morse, Janelle Otzel, Brooke Phillips, Grace Trumler, Allison Van Haren, Anna Watson , & Philep Wiley) for embracing ambiguity and vulnerability and expanding into new ways of seeing; administrators (Dr. Lynn Fuller and Brenna Alonso) for holding space and having conversations about new ideas; museum educators (Laura Huntimer) for offering valuable educational resources; teaching artists (Cayleen Green, Gretchen Larsen) for teaching and sharing their creative practice; the advisory board (Dr. Diana Cornejo-Sanchez, Megan Elliott, and Dr. Jorge Lucero, Anne Thulson, Cody Talarico, Lois Hetland) for giving feedback on the design of the program; Graduate Research Assistants: Azadeh Hassani, Jiabin Lyu, Michael Nti-Ababio, and Zohereh Tamimdari, Sarah Trainin for managing the grant, and the Co-PI team (Kimberley D'Adamo, Dr. HyeonJin Yoon, Dr. Guy Trainin (Lead PI) for facilitating the weaving of many pedagogical and curricular voices.

We also thank former contributors who have moved on to other projects: Carrie Bohmer, Maggie Bertsche, Angel Geller, Andrew (Mark) James, Mackayla Kelsey, Isabella Meier, Fernando Montejano, Lorinda Rice, Casey Sorenson, Joelle Tangen

References

Bequette, J. W., & Bequette, M. B. (2012). A place for art and design education in the STEM conversation. *Art education*, *65*(2), 40-47. https://doi.org/10.1080/00043125.2012.11519167

Bertling, G. J., Galbraith, A., Doss, T. W., Swartzentruber, R., Massey, M. C., & Christen, N. (2024). Transdisciplinary inquiry that elevates the arts? Insights from a data-visualization pilot project. *International Journal of Education & the Arts, 25*(16). http://doi.org/10.26209/ijea25n16

Beswick, K., Anderson, J., & Hurst, C. (2016). The education and development of practising teachers. *Research in mathematics education in Australasia 2012-2015*, 329-352.

Bresler, L. (1995). The subservient, co-equal, affective, and social integration styles and their implications for the arts. *Arts education policy review*, *96*(5), 31-37.

Burnaford, G., Brown, S., Doherty, J., & McLaughlin, H. J. (2007). Arts Integration Frameworks, Research Practice. *Washington, DC: Arts Education Partnership*.

Catterall, J. S. (1998). Does experience in the arts boost academic achievement? A response to Eisner. *Art Education*, *51*(4), 6-11.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). Effective teacher professional development. *Learning policy institute*.

Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, *38*(3), 181-199. https://doi.org/10.3102/0013189x08331140

Donahue, D., & Stuart, J. (2008). Working towards balance: Arts integration in pre-service teacher education in an era of standardization. *Teaching and Teacher Education*, *24*(2), 343-355.

Donahue, D., & Stuart, J. (2008). Working towards balance: Arts integration in pre-service teacher education in an era of standardization. *Teaching and Teacher Education*, *24*(2), 343-355.

Horvath, S. M., Payerhofer, U., Wals, A., & Gratzer, G. (2025). The art of arts-based interventions in transdisciplinary sustainability research. *Sustainability Science*, 1-17. https://doi.org/10.1007/s11625-024-01614-2

Kreber, C. (2009). The modern research university and its disciplines: The interplay between contextual and context-transcendent influences on teaching. In C. Kreber (Ed.), *The university and its disciplines: Teaching and learning within and beyond disciplinary boundaries* (pp. 19-32). Routledge.

La Porte, A. M. (2016). Efficacy of the arts in a transdisciplinary learning experience for culturally diverse fourth graders. *International Electronic Journal of Elementary Education*, *8*(3), 467-480.

Liao, C. (2016). From interdisciplinary to transdisciplinary: An arts-integrated approach to STEAM education. *ART education*, *69*(6), 44-49. https://doi.org/10.1080/00043125.2016.1224873

Liu, L. (2024). Innovation of Teacher-Student Interaction Patterns in the Context of Cultural and Creative Teaching. *Frontiers in Art Research*, *6*(1).

Marshall, J. (2014). Transdisciplinarity and art integration: Toward a new understanding of art-based learning across the curriculum. *Studies in Art Education*, *55*(2), 104-127. https://doi.org/10.1080/00393541.2014.11518922

McChesney, K., & Aldridge, J. M. (2021). What gets in the way? A new conceptual model for the trajectory from teacher professional development to impact. *Professional development in education*, *47*(5), 834-852.

Rooney, R. (2004). Arts-based teaching and learning. *Retrieved September*, *27*, 2015.

Vangrieken, K., Meredith, C., Packer, T., & Kyndt, E. (2017). Teacher communities as a context for professional development: A systematic review. *Teaching and Teacher Education*, *61*, 47-59. https://doi.org/10.1016/j.tate.2016.10.001

Aoki, T. T. (1993). Legitimating lived curriculum: Towards a curricular landscape of multiplicity. *Journal of curriculum and supervision*, *8*(3), 255-68.

Applebee, A. N. (1996). *Curriculum as Conversation: Transforming Traditions of Teaching and Learning*. University of Chicago Press.

Bakhtin, M. M. (1984)(a). *Problems of Dostoevsky's Poetics* (C. Emerson, Trans.; C. Emerson, Ed., W. C. Booth, Intro.). University of Minnesota Press.

Bakhtin, M. M. (1984) (b). *Rabelais and his world* (Vol. 341). Indiana University Press.

Bakhtin, M. M. (1981). The Dialogic Imagination: Four Essays (M. Holquist, Ed., C. Emerson & M. Holquist, Trans.). University of Texas Press.

Biermeier, M. A. (2015). Inspired by Reggio Emilia: emergent curriculum in relationship-driven learning environments. *Young Children*, *70*(5), 72-79.

Biesta, G., & Burbules, N. C. (2003). Pragmatism and educational research.

Basford, L., Lewis, J., & Trout, M. (2021). It can be done: How one charter school combats the school-to-prison pipeline. *The Urban Review*, *53*, 540-562.

Csikszentmihalyi, M., & Csikzentmihaly, M. (1990). *Flow: The psychology of optimal experience* (Vol. 1990, p. 1). New York: Harper & Row.

García-Carrión, R., López de Aguileta, G., Padrós, M., & Ramis-Salas, M. (2020). Implications for social impact of dialogic teaching and learning. *Frontiers in psychology*, *11*, 140.

Biesta, G. (2009). Chapter 1: DECONSTRUCTION, JUSTICE, AND THE VOCATION OF EDUCATION. *Counterpoints*, *323*, 15-37.

Boomer, G., Lester, N., Onore, C., & Cook, J. (1988). Negotiating the curriculum: Educating for the 21st century. Falmer Press.

Cassidy, D. J., & Lancaster, C. (1993). The Grassroots Curriculum: A Dialogue between Children and Teachers. *Young Children*, *48*(6), 47-51.

Cassidy, D. J., Mims, S., Rucker, L., & Boone, S. (2003). emergent curriculum and kindergarten readiness. *Childhood Education*, *79*(4), 194-199

Cagliari, P., Castagnetti, M., Giudici, C., Rinaldi, C., Vecchi, V., & Moss, P. (Eds.). (2016). *Loris Malaguzzi and the schools of Reggio Emilia: A selection of his writings and speeches, 1945-1993*. Routledge.

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. sage.

Charmaz, K. (2008a). Grounded theory as an emergent method. Handbook of emergent methods, 155, 172.

Charmaz, K. (2016). Constructivist Grounded Theory. The Journal of Positive Psychology, 12(3), 299-300.

Chicken, S. (2023). ‘Doing Reggio?’Exploring the complexity of ‘curriculum’migration through a comparison of Reggio Emilia, Italy and the EYFS, England. *Global Studies of Childhood*, *13*(4), 322-340.

Cilliers, P. (1998). *Complexity and Postmodernism: Understanding complex systems*. London: Routledge.

Coşkun, A. (2015). Parents and young learners' metaphorical perceptions about learning English. Journal of Education and Training Studies, 3(5), 231-241.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.

Dittmann, L. (Ed.). (1977). Curriculum Is What Happens: Planning IsT the Key. National Association for the Education. or Jones, E. (1977). Curriculum is what happens. In L. Dittman (Ed.), [Title of the book] (pp. xx-xx). [Publisher]

Doll Jr, W. E. (1993). *A post-modern perspective on curriculum*. Teachers College Press.

Edwards, C. P., Gandini, L., & Forman, G. E. (Eds.). (1998). *The hundred languages of children: The Reggio Emilia approach--advanced reflections*. Greenwood Publishing Group.

Emdin, C. (2016). For White folks who teach in the hood... and the rest of y'all too: Reality pedagogy and urban education. Beacon Press.

Evans, G. L. (2013). A novice researcher’s first walk through the maze of grounded theory: Rationalization for classical grounded theory. *Grounded Theory Review*, *12*(1).

Freire, P. (2020). Pedagogy of the oppressed. In Toward a sociology of education (pp. 374-386). Routledge.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Aldine Publishing Company.

Hilberg, R. S., Tharp, R. G., & DeGeest, L. (2000). The efficacy of CREDE’s Standards-based instruction in American Indian mathematics classes. Equity and Excellence in Education, 33, 32-40.

Jones, E. (2012). The emergence of EC. *YC Young Children*, *67*(2), 66.

Jones, E., Evans, K., & Rencken, K. S. (2001). *The lively kindergarten:* emergent curriculum *in action*. National Association for the Education of Young Children, 1509 16th Street, NW, Washington, DC 20036-1426.

ones, E., & Nimmo, J. (1994). *EC*. Washington, D.C.: National Association for the Education of Young Children.

Inlow, G. M. (1966). The emergent in curriculum. New York. Wiley.

Kovecses, Z. (2010). *Metaphor: A practical introduction*. Oxford university press.

Langer, E. J. (2014). *Mindfulness*. Hachette Books [There are 3 different publishers for this book on Amazon, Google Scholar, an Google Book,. Since I am reading from Google Books I used its reference for eBook, but finally I should write the publisher of the paper version since we need page numbers].

Langer, E. J. (2014). Mindfulness forward and back. In A. le, C. T. Ngnoumen, & E. J. Langer (Eds.), The Wiley Blackwell handbook of mindfulness (pp. 7–20). Wiley Blackwell.

Lakoff, G., & Johnson, M. (2008). *Metaphors we live by*. University of Chicago press.

Machin, D., & Mayr, A. (2023). How to do critical discourse analysis: A multimodal introduction (2nd ed.). SAGE Publications Ltd.Munna, A., & Kalam, M. A. (2021). Application of theories, principles and models of curriculum design: A literature review. *International Journal of Multidisciplinary and Current Educational Research*, *3*(1).

Marshal, J., & D'Adamo, K. (2011). Art practice as research in the classroom: A new paradigm in art education. *Art education*, *64*(5), 12-18.

Nxumalo, F., Vintimilla, C. D., & Nelson, N. (2018). Pedagogical gatherings in early childhood education: Mapping interferences in emergent curriculum. *Curriculum Inquiry*, *48*(4), 433-453.

Powell, K., & Lajevic, L. (2011). Emergent places in preservice art teaching: Lived curriculum, relationality, and embodied knowledge. *Studies in Art Education*, *53*(1), 35-52.

Rinaldi, C. (2021). *In dialogue with Reggio Emilia: Listening, researching and learning*. Routledge.

Riley, D. A., & Roach, M. A. (2006). Helping teachers grow: Toward theory and practice of an "emergent curriculum" model of staff development. *Early childhood education journal*, *33*, 363-370.

Robinson, K., & Aronica, L. (2016). *Creative schools: The grassroots revolution that's transforming education*. Penguin books.

Rule, P. (2006). Bakhtin and the poetics of pedagogy: A dialogic approach. *Journal of Education*, *40*(1), 80-101.

Parker, J. (2003). Reconceptualising the curriculum: From commodification to transformation. *Teaching in Higher Education*, *8*(4), 529-543.

Stacey, S. (2018). Emergent curriculum in early childhood settings: From theory to practice (2nd ed.). Redleaf Press.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research techniques*. Sage publications.

Osberg, D., & Biesta, G. (2008a). The EC: Navigating a complex course between unguided learning and planned enculturation. *Journal of Curriculum Studies*, *40*(3), 313-328.

Osberg, D., Biesta, G., & Cilliers, P. (2008b). From representation to emergence: Complexity's challenge to the epistemology of schooling. *Educational philosophy and theory*, *40*(1), 213-227.

Smith, S., Kempster, S., & Wenger-Trayner, E. (2019). Developing a program community of practice for leadership development. *Journal of Management Education*, *43*(1), 62-88.

Smagorinsky, P. (2017). Discussion, conversation, and dialogue: Applebee, Bakhtin, and speech in school. In R. K. Durst, G. E. Newell, & J. D. Marshall (Eds.), English Language Arts Research and Teaching (pp.27-40). Routledge.

Shaw, P. A., Cole, B., & Russell, J. L. (2013). 19: Determining our own tempos: Exploring slow pedagogy, curriculum, assessment, and professional development. *To improve the academy*, *32*(1), 319-334.

Stenhouse, L. (1975). An introduction to curriculum research and development. *(No Title)*.

Sullivan, P., Smith, M., & Matusov, E. (2009). Bakhtin, Socrates and the carnivalesque in education. *New Ideas in Psychology*, *27*(3), 326-342.

Tal, C. (2014). Introduction of an emergent curriculum and an inclusive pedagogy in a traditional setting in Israel: A case study. International Journal of Early Years Education, 22(2), 141-155.

Tisdell, E. J., & Merriam, S. B. (2015). *Qualitative research: A guide to design and implementation*. Jossey-Bass.

Tyler, R. W. (1949). *Basic principles of curriculum and instruction*. The University of Chicago Press.

Wien, C. A. (2015). Emergent curriculum *in the primary classroom: Interpreting the Reggio Emilia approach in schools*. Teachers College Press.