Exploring the Phenomenon of Arts-Based Formative Assessment:

Lived Experiences of Elementary Teachers with High Self-efficacy using Arts Integration

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ABSTRACT

This study aimed to explore the lived experiences of general education classroom teachers (grades 1-5) who have been highly effective in using arts integration and their perceptions of using the arts for formative assessment. The study explored the ways in which teachers with high self-efficacy integrating the arts designed and facilitated arts-based formative assessment as well as teachers' perceptions of student learning when using the arts to formatively assess. This study used a phenomenological approach to gather insights from eight elementary teachers at eight different schools in a large metro public school district. Data were collected through in-depth interviews, classroom observations, and lesson materials. The findings revealed how arts-based formative assessment methods were used to differentiate diverse learners and make student thinking visible. The findings discussed the different ways arts-based formative assessment can be used when designing rubrics and implementing instruction. Findings linked the learning environment, teacher collaboration and professional learning, and teachers' growth mindset to high teacher efficacy with assessing arts integration. When exploring teachers' perceptions of student learning when using the arts to formatively assess, high student engagement, collaboration, and immersion in the creative process were positively associated with social, emotional, and academic growth in students. The study's findings highlighted implications for teachers, school and district leaders, and arts integration training programs.

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Finally, I acknowledge and thank the educators who are serving students through the arts every day in their classrooms. These teachers are on the frontline, and I am confident that their service is shaping lives and developing future generations of creative thinkers and art-lovers. I hope this research inspires teachers to continue integrating the arts in brave new ways that bring an abundance of joy and purpose to their teaching practice.

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INTRODUCTION

This research study explores the perceptions of teachers with high self-efficacy using arts integration in the elementary classroom. The topic of arts integration requires background knowledge and context to understand the complexity of the research problem that addresses teacher self-efficacy. This chapter offers a background of the research topic and relates existing research to the problem itself around sustaining an arts integration instructional practice. The research problem is further described, and implications of the problem are considered. The purpose of the study section briefly addresses the gap in research around assessing student learning using arts integration and also presents the objectives of the research. The research questions are included to justify the methodology selected. The theoretical and conceptual framework used to frame the research study helps explain the foundation of the research problem. Researcher assumptions and delimitations are shared as well as definitions of terms relating to the research.

Background

The arts manifest in a variety of ways in a school community, but historically the arts have been perceived as an activity that promotes creativity and human expression (Goldberg, 2012). Whether a student participates in singing a song or sketching a portrait, a performative task of this nature usually engages students in thinking differently. Arts integration is an approach to teaching in which students construct and demonstrate understanding through an art form, such as dance, drama, visual arts, or music (Duma & Silverstein, 2014). This pedagogy is most widely associated with the Kennedy Center, which is considered the founding father of arts

integration and established the Changing Education Through the Arts (CETA) in 1999 (Silverstein & Layne, 2020). CETA conducts research and provides professional learning for classroom teachers all over the country in the area of arts integration. This teaching approach requires that students engage in the creative process and use an art form to express their understanding of another subject area or curricular concept (Silverstein & Layne, 2020). For example, a student may choreograph a dance to demonstrate their understanding of the various stages in the life cycle of a frog. Alternatively, students may use Monet's *Water Lilies* to examine the inner workings of a pond ecosystem.

Not only does existing research connect arts integration to student engagement and a variety of strategies for constructing and assessing knowledge, but the research links arts integration to being more culturally responsive and inclusive of all learners (Bellisario & Donovan, 2012). Donovan and Pascale (2012) associated arts integration with fostering more democratic learning environments by expanding language and perspectives expressed in classrooms. Silverstein and Layne (2020) connected arts integration to more culturally, economically, and academically diverse classrooms because of the variety of ways students could express their understanding when using the arts.

Designing learning environments for culturally responsive teaching includes considering how arts integration is used to assess student learning. Traditional assessment methods typically use only writing and speaking to determine students' understanding, but arts integration provides opportunities for different forms of expression to be used (Silverstein & Layne, 2020). For example, students may write and perform a poem to demonstrate their understanding of the rock cycle, and it may include an accompanying rubric. In arts integration, the formative and summative assessments are performative tasks, which require a variety of nontraditional

assessment methods on the part of the teacher. Performance tasks are open-ended, complex, and authentic, which contrasts the typical traditional assessment: pencil/paper, selected, or constructed responses (Wiggins & McTighe, 1998). When using the arts in a student-centered classroom, there are ample opportunities for teachers to observe and adjust instruction while students explore, create, and even make mistakes while discovering (Jaquith & Hathaway, 2012). Although assessment is inherent to instruction, this study deeply explores the inner workings of how teachers with high self-efficacy in arts integration use the arts to assess student learning.

Survey History

The inception of this study's research problem emerges after reviewing historic data collected by a school district that was investigating teacher self-efficacy using arts integration among teachers. A voluntary survey was administered by the principals in the district's cohort of arts integration model schools. The survey questions addressed five domains for arts integration self-efficacy: instructional design, instructional strategies, assessment, collaboration, and learning environment. The survey included eight participating elementary schools and included 326 responses. The participating teachers received at least 1 year of quarterly district professional learning training and instructional support with arts integration. The data collected was used by both the local school and the district to inform the cohort's arts integration planning.

As indicated in Table 1, analysis of the survey data unveils a significantly lower mean score in the domain of assessing arts integration than in any of the other domains.

Table 1

Overall Mean Scores for Arts Integration Teacher Efficacy Domains

Tenets of efficacy	Instructional design	Instructional strategies	Assessment methods	Collaboration	Learning environment
Mean score	3.07	2.92	.53	3.12	3.07

The survey included close-ended Likert-scale prompts that ranged from strongly agree, agree, disagree, to strongly disagree (see Appendix A). Two survey prompts were categorized under the assessment methods domain:

- I am comfortable with creating arts integrated assessments.
- I am confident in assessing student learning using the various art modalities.

The incongruent score in the area of assessment methods prompts a need for further exploration of assessment when integrating the arts and informs the study's research questions. This historic data also plays a role in selecting participants for the study. Data analysis identifies teacher participants who have scored high in total self-efficacy, including the area of assessment. By focusing on highly effective teachers, a deeper understanding of the phenomenon of assessment in arts integrative classrooms is explored.

Problem Statement

When a teacher hears a student repeatedly play the wrong note on the violin, the teacher corrects the student in the moment of playing, providing timely and critical feedback. Formative assessment, such as this, is innate in fine arts classrooms that are performance-based. Formative assessment is a process and not a specific test that happens during instruction, and it is used by teachers and students to make the necessary adjustments to ensure that learning objectives are being met (Popham, 2008). Schools that take on arts integration as an instructional model also use the art modalities across curricular areas including reading, math, social studies, and science. The general education teachers facilitating arts integration do not typically have a background in the fine arts and therefore may not fully realize how the arts can be used to assess classroom learning. Southern et al. (2020) linked low levels of arts integration teacher self-efficacy to teachers lacking confidence in engaging in the arts and not identifying with being artists

themselves. In arts integration, the art modalities are used as a vehicle to demonstrate understanding of a curricular concept, and therefore, formative assessment is a critical part of this instructional approach. Popham (2008) described formative assessment as a process benefitting both the teacher and student, in which ongoing assessment informs instructional procedures while the learning was occurring.

This problem around formative assessment aligns with the findings of the district survey previously mentioned. The historic survey data indicated that the lowest mean-scored question addressed teacher confidence in using arts modalities to assess student learning. The teachers who scored highest on this question addressing assessment also scored in the highest percentile of overall teacher self-efficacy. The survey results suggested a need for examining the perceptions of these high-scoring teachers to better understand why they were significantly more confident in using the arts to assess student learning than other teachers. Exploring this phenomenon requires an examination of the existing research of the arts in the context of formative assessment; however, there is a lack of research on assessment for the arts in general (Andrade et al., 2014; Chen & Andrade, 2016). Andrade et al. (2014) conducted a study with visual arts teachers examining formative assessment in the visual arts classroom. Andrade et al.'s research emphasized the need for teachers to shift their mindset on how teachers assess the arts by embedding assessment through their instruction, rather than solely in an evaluative fashion. Considering how formative assessment occurs throughout the duration of any lesson is critical, and an arts-integrated lesson is no different. Although there is scarce existing research on assessment of the arts, there is an even greater gap in literature on how the arts can be integrated into assessing core curricular subjects, such as reading, math, science, and social studies. Establishing evidence-based practice on how the arts can assess and inform instructional steps is

demanded. There is a need for further understanding of teacher self-efficacy using arts integration, especially in using the arts to design and implement assessments.

Teachers using an arts integration approach who lack self-efficacy in using the arts to assess are missing the mark on the very definition of arts integration as defined by the Kennedy Center's Changing Education Through the Arts, which states, "students will construct and demonstrate understanding through an art form" (Silverstein & Layne, 2020, para. 1). Donovan and Pascale (2012) described arts integration as being a vehicle that students could use to investigate, express, and reflect on the curricular concepts through the art forms. This study aims to determine how teachers with an arts integrative pedagogy view formative assessment and the role the arts play in that very phenomenon. When conducting this research on teachers' use of arts-based formative assessment, the findings reveal key factors that influence when, how, and why assessment of learning is or is not happening. Just as formative assessment is critical to instruction, formative assessment during arts integration can determine whether or not the instructional concept was mastered (Brookhart & Nitko, 2018). For example, if dramatic role-playing is used to explore the parts of a plant, the teacher should also use drama to assess students' degree of understanding around this particular concept. A firmer understanding on approaching assessment during arts integration will inform how schools address training and supporting teachers with this pedagogy.

Purpose of the Study

The purpose of this study is to better understand the lived experiences of teachers who are highly effective in arts integration and their perceptions of formative assessment. The findings of this study can potentially strengthen teachers' formative assessment practice by providing alternative assessment methods that are both effective and creative. Starko (2014)

associated creativity in the classroom with students' development in areas such as risk-taking, self-regulation, content processing, flexible thinking, collaboration skills, and intrinsic motivation and passion. Ellis and Fouts (2001) linked artistic choices and self-expression to a more personalized learning experiences for students. Arts integration encourages inquiry in the classroom because students are constructing knowledge based on investigation and interpretation (Marshall & Donahue, 2014). Arts integration requires a dialogue to occur between disciplines that can provide students with relevant learning that is rich in context (Goldberg, 2012). This study aims to research the experiences of teachers using the arts as a formative assessment method and includes two goals. First, the study intends to explore how general education teachers with high self-efficacy in arts integration use the arts to formatively assess student learning. This requires a thorough understanding of the circumstances and ways in which teachers use the arts modalities to formatively assess. By interpreting how teachers approach formative assessment, a deeper understanding of teacher perceptions of the phenomenon can be obtained. Secondly, the purpose of this study is to explore the relationship between formative assessment and the various sources of teacher self-efficacy in arts integration. A fuller picture of this relationship highlights other critical components of arts-based formative assessment that relate to higher teacher efficacy.

This qualitative study examines teachers' lived experiences with arts-based formative assessment through a variety of data collection methods. Data is collected in the form of participant interviews, classroom observations, and lesson materials. The participants are selected by a school administrator or instructional coach at each of the participating eight schools. The district's professional learning survey, arts integration walkthroughs, classroom

observations, and student work are considered when selecting the purposeful sampling of teachers for the study.

Research Questions

To address the problem of assessment practices with arts integration, the arts-based methods that teachers used for formative assessment are explored in-depth. Additionally, the relationship between formative assessment and teacher self-efficacy is examined to deepen understanding of the phenomenon.

This study consists of one primary research question and two subquestions designed specifically for this study:

- ❖ What experiences do elementary general education teachers with high self-efficacy in arts integration have using the arts to formatively assess student learning?
    - How do teachers with high self-efficacy in arts integration design and implement formative assessment?
    - What are teacher perceptions of student learning when using the arts to formatively assess in the elementary general education classroom?

Theoretical Framework

This research study on teacher self-efficacy using arts integration is framed using Bandura's (1997) Self-efficacy Theory. The Self-Efficacy Theory is rooted in understanding that self-efficacy can come from distinct sources, including mastery experiences, verbal persuasion, vicarious experiences, and physiological arousal. These sources can in turn influence cognitive processing and lead to an increase or decrease in self-efficacy. To investigate the phenomenon of teacher self-efficacy when assessing arts integration, various sources are examined in teachers' instructional practices.

Bandura (1997) proposed four sources that contribute to teachers' belief systems including mastery experiences, verbal persuasion, vicarious experiences, and physiological arousal. Mastery experiences usually yield high levels of teacher efficacy because they result from teaching and first-hand experience of a teaching accomplishment. Verbal persuasion influences efficacy in the form of encouragement, which can result in the teacher feeling capable of trying a new teaching strategy. Vicarious experiences address a teacher analyzing their own capabilities through observing another teacher. Depending on whether the observers see themselves in the modeling often determines the effect this source has on teacher efficacy (Bandura, 1997). Emotional and physiological states are also sources that impact self-efficacy; for example, if a teacher feels particularly excited or anxious about facilitating a teaching strategy, self-efficacy will be affected. Bandura's (1986) earlier Social Cognitive Theory also included physiological experiences that emphasized how emotional responses such as anxiety or excitement inform teachers' efficacy. Understanding the sources that impact teachers' self-efficacy provides relevant information when exploring how self-efficacy could develop when integrating the arts.

Significance of the Study

This qualitative study can contribute to the research in the field of arts integration and also provide substantial guidance on how the arts can be used to formatively assess learning in the elementary classroom. Formative assessment engages students actively and measures students' mastery on the learning journey. No matter the subject or discipline area, formative assessment is a research-proven approach to increasing student achievement and proves to be more cost effective than reducing class sizes (National Council of Teachers of Mathematics, 2016).

Although there is research on the positive effect of arts integration centered professional development on teacher self-efficacy (Anderson & Pitts, 2017; Southern et al., 2020; Steele, 2019), high teacher self-efficacy in arts integration requires the application of arts integration to all areas of a teaching practice, including not only instruction but also assessment. Existing research in the field includes discussion of the need for ongoing instructional support for teachers after the onset of arts integration training (Buck & Snook, 2020). Yet, no research on how teachers with high levels of self-efficacy in arts integration use the arts to assess student learning in the general curricular areas has occurred. Many arts integration studies have been conducted utilizing federal arts in education grants that include professional learning funding for a limited time period with a partnering community arts organization (Anderson et al., 2020; Garrett, 2010). Arts integration can be challenging to sustain when the grant funding period ends and the school no longer has the means to provide teachers with professional learning support (Duma & Silverstein, 2014). Researching the experiences of general education teachers practicing arts integration and their efficacy using the arts to assess learning provides an original contribution to the field. It also provides a roadmap for teachers when using the arts to develop formative assessments.

There are many goals that a school community may be interested in attaining when selecting arts integration as the instructional model. Duma and Silverstein (2014) surveyed numerous studies linking arts integration to higher test scores and academic gains in subgroups of students with specific learning needs, and therefore, the research on the student benefits of arts integrative strategies and projects is undeniable. However, there is a lack of research on how arts integrative strategies, projects, and lessons can shape how teachers view formative assessment. The arts are a vehicle for student expression of ideas, feelings, and acquired knowledge

(Casciano et al., 2019), and formative assessment requires actively engaging students and encouraging them to express themselves (Black et al., 2005). The natural synergy between both of these learning processes invites deeper investigation. The arts foster critical life skills, such as communication, negotiation, and innovation (Casciano et al., 2019). With arts integration, teachers facilitate students engaging in the creative process using an artist lens to explore and think deeply about curricular ideas and relevant problems. The findings from this study illuminate perspectives on how and when the arts can be used to assess student learning over a more traditional assessment method. The study's findings benefit schools and districts when designing effective formative assessment practices that integrate the arts. This study also resulted in understanding how and why teachers develop higher self-efficacy in arts integration when using arts-based formative assessments for student learning across the curriculum.

Delimitations

There are delimitations or boundaries within the scope of this study that focus the research. One delimitation of the study is that the interviews only include interviewing teachers with high rates of teacher self-efficacy, and therefore, this may appear to result in an incomplete picture of low-scoring teachers at the other end of the spectrum. However, this focus on a high-scoring sampling is intentional when designing the study due to the review of literature and my personal experience in the field of arts integration. The literature presents a variety of challenges teachers face that prevent them from using arts integration in their practice, much less as a method for assessment. The gap in literature exists in investigating how teachers with high self-efficacy overcome these challenges and what factors lead them to using arts integration, especially when formatively assessing student learning. To do this, focusing on high-scoring teachers is the most effective course of study.

Selecting only one teacher per school for the study is a delimitation because it results in a narrow view of each school community. However, this design is intentional because the purpose of the study is not to closely examine one specific school and its success with arts integration. On the contrary, the purpose of the study is to closely examine a variety of teachers from different contexts with highly effective arts integration practices. Comparing teachers in different school communities strengthens the study by elevating what eight distinct teaching practices have in common around assessing arts integration. Analysis of data from teachers at eight different arts integration schools addresses how arts integration occurs with student demographics and learning environments across a range of schools.

Another delimitation of the study is selecting only elementary schools as the area of focus. The study examines general education classrooms, and therefore, the teachers need to be generalists. In secondary schools, teachers teach specific subject areas, which are content-specific. Elementary teachers in a general education setting typically teach a broad range of subjects and skills, which provides an opportunity for examining how integration occurs across the grade level curriculum. The sampling of teachers selected for the study is limited to first grade through fifth grade teachers.

Assumptions

I am the researcher conducting the study in a school district I routinely work with, so there are assumptions towards the study. I assume that teachers with high self-efficacy in assessing arts integration are able to provide examples of how, when, and why they use the arts to formatively assess learning. There is an assumption that teachers with high rates of self-efficacy in assessing arts integration lead to better understanding of how assessment relates to the other areas of self-efficacy in arts integration, including instruction, collaboration, and the

learning environment. I also assume that the participants selected are willing to participate in the study. Additionally, I assume that collecting this data from teachers with high self-efficacy will lead to a deeper understanding of how self-efficacy in arts integration and formative assessment occurs.

Definitions of Terms

The following terms are listed and defined in order to provide understanding of the research topic and its context within the study.

Approach to teaching refers to a pedagogical path that a teacher uses when designing and facilitating instruction (Silverstein & Layne, 2020). An approach to teaching can range from being teacher-directed and traditional to student-centered and progressive (Silverstein & Layne, 2020).

Arts education refers to the classes offered in the various fine art subjects (visual arts, music, media arts, dance, and drama) in prekindergarten through grade 12 (Wan et al., 2018). These classes are taught by an art specialist trained and certified in a particular art form, and there are art standards for each grade level (Wan et al., 2018).

Arts enhancement refers to using the arts to support a curricular area or to serve as a "hook"; however, the art form is not explicit and the learning objectives are not inclusive of the art standards (Silverstein & Layne, 2020). An example of this would be drawing a picture of a favorite part of a story without any expectation to apply any art elements to the task of drawing.

Art form is any branch of creative work in the arts, such as visual arts, media arts, dance, drama, or music (Silverstein & Layne, 2020).

Arts integration is an approach to teaching that requires students to engage in the creative process and meet evolving objectives in both the arts and another content area (Silverstein &

Layne, 2020). Arts integration requires a conceptual bridge to be built between the art form and the content area skill or concept (Robinson, 2013). An example of this would be students choreographing a dance that demonstrates the stages of the water cycle.

Arts integration sustainability refers to the lasting presence of the arts being used to approach classroom learning across all content areas and disciplines continuously.

Assessment methods when using arts integration refers to the performative tasks that students complete when immersed in the creative process (Popham, 2008). Assessment methods provide students with a variety of methods for demonstrating their understanding. The assessment methods also inform the teacher on the next instructional steps (Popham, 2008).

School model is a school's specific organizational and instructional method for teaching and learning usually adopted or approved by a school district (Windsor-Liscombe, 2016). An arts integration school model involves teachers and students integrating the arts routinely as a method for learning inside and outside the classroom.

Art specialist is a teacher who is certified in a specific fine arts area, such as visual arts, music, dance, or drama (Wan et al., 2018).

Creative process is referred to as the stages that an artist engages in when creating something, and the process involves using inquiry skills and experimentation; the dynamic stages include imagining, exploring, creating, reflecting, and sharing (Silverstein & Layne, 2020).

Instructional design is architecting the learning by relating the learning objective to the learning experience itself (Panadero et al., 2018). Similarly, Flinders and Thornton (2017) described the formal elements of a curriculum design as being learning objectives and the learning experience.

Instructional strategies are teaching strategies that teachers use in their pedagogy to facilitate learning. These strategies are taught to the learner in order to reach learning objectives (Garrett, 2010).

Learning environment is both the physical and conceptual space in which a student feels supported in their pursuit of knowledge (Clark, 2012).

Learning modalities, referred to by Howard Gardner (1993) as "multiple intelligences," are the styles in which children learn such as kinesthetic, auditory, and visual.

Professional learning refers to the ongoing training for professional teachers who are currently in the teaching profession (Krakaur, 2017). To keep a teaching certification valid, professional learning credits are required. Learning credits are earned by experiences such as classes, workshops, and training programs (Krakaur, 2017).

S.T.E.A.M learning is an instructional approach that integrates science, technology, engineering, arts, and math to access inquiry and problem solving (Riley, 2010).

Teacher Collaboration when using arts integration refers to teachers working with their peers to design arts-integrated lessons. The lessons address evolving learning objectives in an art form and content area (Starko, 2014). For example, if a general education teacher collaborates with the music teacher, they can find ways to teach mathematical concepts through reading and playing music.

Teaching artist is an artist (and not usually a certified teacher) who works with classroom teachers and students through various residency programs or workshops arranged through community partnerships (Garrett, 2010).

Teacher Self-Efficacy is their personal belief in how well they can perform in a particular situation (Bandura, 1997). In this study's context, teacher self-efficacy refers to teachers' confidence in effectively facilitating arts integration in their instructional practice.

Summary

In this chapter, the research study is introduced by providing background information and presenting implications around the problem of using the arts to assess student learning when engaging in an instructional practice of arts integration. The purpose of the study is to address the gaps in research and discusses the possibilities of the study and potential impact of the research on the field. This introduction includes a brief examination of how Bandura's sources of self-efficacy help frame the study. The methodology describes the rationale for how the research questions inform the design of a qualitative approach. Chapter 2 discusses the existing literature on the topic of arts integration in relation to the study's purpose. This review of literature will relate specifically to teacher self-efficacy in arts integration and formative assessment theory and methods.

Chapter II

LITERATURE REVIEW

Investigating how the arts are used to formatively assess student learning is a critical component of teacher self-efficacy in arts integration. In order to fully realize the role formative assessment plays in arts integration, the other components of teacher self-efficacy, including instruction, collaboration, and the learning environment, must be further examined. This chapter begins by further defining arts integration, addressing the benefits of this teaching pedagogy, and illustrating how arts integration occurs in Georgia schools. Next, Bandura's Self-Efficacy Theory and its relationship to the existing research on teacher self-efficacy when using arts integration is discussed. The chapter is divided into headings that outline the four sources of self-efficacy and how they relate to arts integration: Vicarious Experiences, Mastery Experiences, Physiological Arousal, and Verbal Persuasion. Under each heading are subheadings specific to how this source is situated in an arts integration pedagogy: Teacher Training, Understanding of the Arts, Instruction and Assessment, Collaboration, and Learning Environment. After the sources of self-efficacy are addressed, formative assessment is discussed at length including existing literature on formative assessment in the general education classroom and fine arts classroom. Additionally, research that links formative assessment to teacher self-efficacy is presented. In conclusion, the headings for Chapter 2 include The Pedagogy of Arts Integration, Bandura's Teacher Self-Efficacy Theory, Vicarious Experiences, Mastery Experiences, Physiological Arousal, Verbal Persuasion, and Formative Assessment.

The Pedagogy of Arts Integration

Approaching arts integration in instruction involves creating "opportunities for students to work 'in' an art form (i.e., music, dance, theatre, visual art) and 'through' an art form (i.e., integrated) to achieve academic, artistic, social, and personal goals" (Krakaur, 2017, p. 14). Every teacher falls along a continuum with their understanding of how to facilitate arts integration effectively. Arts integration fosters a learning environment that is fueled by students' artistic expression and collaboration. The Kennedy Center's Changing Education Through the Arts (CETA) stresses the importance of arts integration enabling students to express understanding through art forms, connecting objectives in the art form and subject area simultaneously (Silverstein & Layne, 2020).

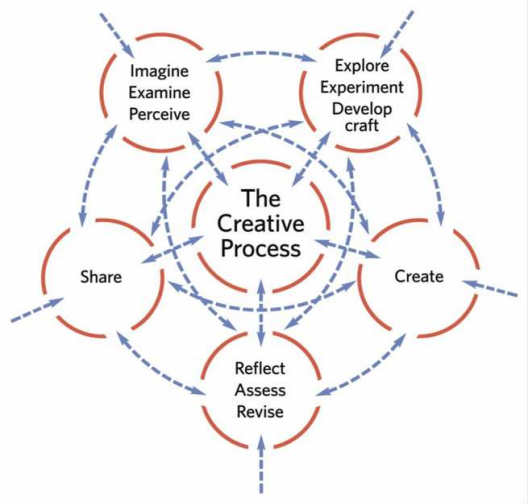
The arts can occur in a multitude of ways within a school community aiming to weave the arts into the fabric of their school. CETA described this balanced art ecosystem in a school as including arts enhancement (learning with the arts), arts integration (learning through the arts), and arts education (learning about the arts). When arts integration is occurring with fidelity, evolving objectives and standards are being addressed in both the fine arts and the subject area of integration (Silverstein & Layne, 2020). This learning *through the arts* demands higher order thinking and integrates art-making techniques and the creative process. CETA illustrates how arts integration is different from using the arts to enhance curriculum, which is also referred to as learning *with the arts.* For example, when enhancing curriculum with the arts, a teacher may use a song to practice skip-counting with students. The students are not necessarily engaging in a creative process; however, they are using the music modality to connect to rhythmic skip-counting. The third way the arts are used in a school is when students learn *about the arts,* which is also referred to as arts education. For decades, the arts have traditionally been taught in siloed

areas as separate from the core subject areas. Most often in a K-12 education, the arts were taught by an arts specialist who only taught specifically about their art form (Goldberg, 2012).

Arts integration is a methodology for teaching and learning that is being enforced in school models around the world, inviting students to explore how artists see and make sense of the world around them. Goldberg (2012) described the artistic process as one that demanded imagination and creative problem-solving, which were all relevant in classroom learning. Silverstein and Layne (2020) emphasized that the creative process was at the core of true arts integration because when students engaged in the creative process, they must apply knowledge to create something new and original. The process involves flexible ordering of five steps where students brainstorm, create, explore, reflect and revise (Silverstein & Layne, 2020). As shown in Figure 1, The Kennedy Center's CETA describes the creative process as being iterative and dynamic in nature rather than being linear and rigid in its order.

Figure 1

The Creative Process



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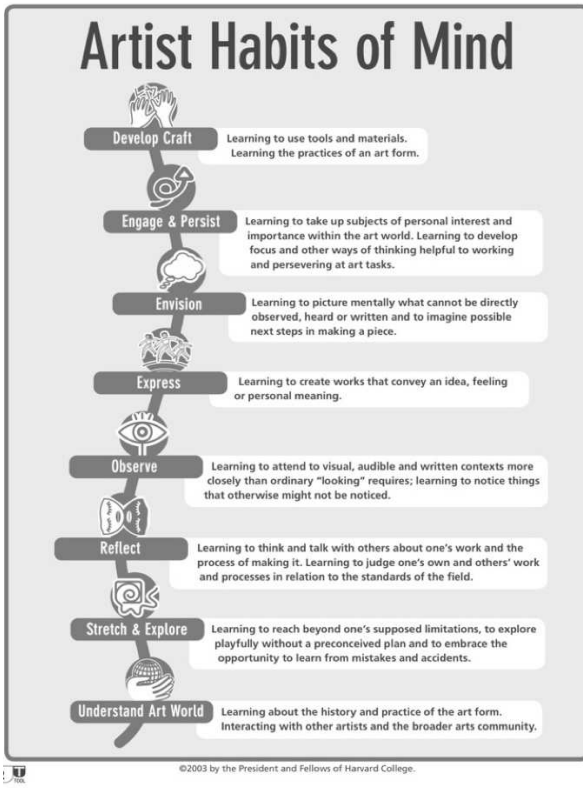
Developed by Harvard Graduate School of Education's Project Zero (2003), another framework used by all teachers teaching all subjects is the Artist Habits of Mind (see Figure 2). This research was conducted looking specifically at the habits of mind present in strong visual arts classrooms, and the framework has been used in arts integration practices for interdisciplinary learning (Project Zero, 2003). Both approaches, the creative process and Artist Habits of Mind, emphasize the thinking that occurs for an artist when ideating and creating an original work.

Figure 2

Artist Habits of Mind



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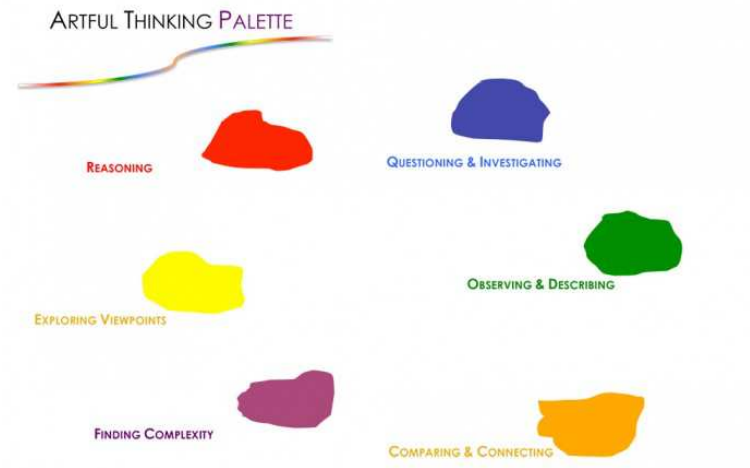
Project Zero's Artful Thinking Routines are another body of arts integration research that addresses the critical thinking that occurs when integrating the arts (Tishman & Palmer, 2006). Artful Thinking Routines make thinking visible by engaging students in a simple protocol of open-ended prompts responding to a piece of visual arts or music (Tishman & Palmer, 2006). The mixed-methods research conducted by Tishman and Palmer (2006) to establish Artful Thinking Routines targeted K-12 teachers and resulted in the development of several routines that can be used to address the six different thinking dispositions that emerged (see Figure 3).

Artful Thinking Routines provide teachers with an opportunity to integrate art pieces with non-arts curricular concepts and lead students to deeper thinking and understanding (Tishman & Palmer, 2006).

Figure 3

Thinking Dispositions Used when Responding to Art



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Why Arts Integration?

Arts integration has been linked to both academic and personal growth in students. Steele (2019) used a longitudinal case study examining six students and their parents over the span of 5 years to explore how early arts integration experiences in elementary school impacted their lives both personally and academically in high school. Results indicated that the early arts integration experiences had a profound impact on students' lives as high schoolers, especially in their artistic sensibilities and their positive relationships engaging with their school community (Steele, 2019). Duma and Silverstein (2014) analyzed a decade of arts integration research to better understand the impact it had on schools in the Kennedy Center's CETA programs and found

significant growth in student achievement data and social emotional learning when using arts integration. Sasz (2023) associated arts integration with students' psychological benefits, including abstract thinking, problem-solving, and exposure to diverse cultures. Arts integration also provides opportunities for students to work collaboratively, approaching academic subjects in untraditional ways and fostering 21st century skills that included critical thinking, communication, collaboration, and creativity (Corbisiero-Drakos et al., 2021). Gullatt (2008) conducted a review of the arts integration literature and linked arts integration practices to higher order thinking skills. Similar to Sasz, Gullatt's review of the implications of arts integration discussed the diverse perspectives and multiculturalism that is celebrated through the arts.

The arts have a far and wide reach with students of different socioeconomic and academic levels. The National Endowment for the Arts and Catterall (2012) conducted four longitudinal studies on the impact of the arts, specifically on at-risk youth who had high levels of arts engagement from kindergarten through elementary school. The research linked higher arts engagement to higher student achievement scores in both science and writing when compared to students with low engagement in the arts. Another study using longitudinal research examined the impact of Turnaround Arts, which was a national school reform program that implements arts education and integration in underperforming schools (Stoelinga et al., 2015). Stoelinga et al. (2015) examined eight schools, specifically tracking economically disadvantaged teenagers who had in-depth experiences in the arts and compared these students with teens from similar socioeconomics who had less exposure to the arts. Stoelinga et al. determined that the students with in-depth art experiences performed better academically and had higher rates of college enrollment. In the eight schools receiving Turnaround Arts programs, 85% of teachers reported integrating the arts into their instruction of non-art core content (Stoelinga et al., 2015).

Arts integration has proven to impact student achievement scores (Duma & Silverstein, 2014). The Kennedy Center for the Performing Arts and the National Endowment for the Arts conducted a study that resulted in significant academic gains in math and reading scores for students in grades 3-5 participating in the Arts for Academic Achievement programs (Ingram & Riedel, 2003). Brouillette and Graham (2016) conducted a study comparing STEAM learning (Science, Technology, Engineering, Arts, and Mathematics) to STEM learning, which included all of the same interdisciplinary areas except the arts. When comparing the benchmark assessment scores of students grades 3-5, the students who received STEAM instruction went from the 50th percentile to the 63rd percentile in the district science assessment (Brouillette & Graham, 2016). This gain was particularly significant because the students receiving the STEAM instruction received only nine hours from a highly qualified teacher. These findings support the claim that high teacher efficacy in arts integration can impact student achievement even with minimal arts integrated instructional time.

Although the research indicates that the arts can benefit all types of learners academically, issues of equity still arise in school districts. LaJevic (2013) discussed the need for an arts-based approach to be accessible to all students after examining district curriculum and finding arts-based curriculum only being associated with gifted, talented student resources and the general education classroom resources, including assignments linked to textbooks and worksheets or workbooks. In other cases, arts integration can be difficult for teachers to adopt consistently due to the pressures from administrators and districts associated with standardized test preparation (Sasz, 2023).

Arts Integration in Georgia Schools

The Georgia Department of Education (GaDOE) recognizes arts integration schools across the state through the Creative Schools certification program (Georgia Department of Education, 2023c). The GaDOE's (2023c) criteria required for a school to qualify as a Creative School and receive the Arts Integration School of Excellence includes providing access to rigorous and relevant arts integration for all students in every subject area. Ongoing professional learning for teachers and involvement in the community through the arts must also be evident. A scoring rubric is used for the GaDOE Creative School certification (see Appendix B). The Creative School certification program began awarding school applicants in 2020 and has certified a total of 11 schools across the state (Georgia Department of Education, 2023c). The GaDOE provides free virtual professional learning modules and a library of arts-integrated lesson plans for K-12 to assist teachers with arts integration.

Schools in the state of Georgia can also be recognized for their integration of the arts when being a GaDOE STEAM certified school. STEAM curriculum is project-based and engages students in exploring 21st century skills through the integration of science, technology, engineering, arts, and mathematics into units of study (Georgia Department of Education, 2023d). Schools that seek the state certification for STEAM must indicate that the arts are being integrated routinely into instruction and intentionally used in the design and facilitation of grade level science units of study. In the state of Georgia, there are nine elementary schools, four middle schools, and one high school that are STEAM certified or have a certification status of in-progress (Georgia Department of Education, 2023d).

Some schools in the state of Georgia have district certification programs they can participate in when developing arts integration or STEAM school models. Specifically, in this

study, there is a district certification process for schools, which includes district-level support in the form of district professional learning. District certification processes are usually designed and managed by the fine arts or STEAM departments that exist in larger districts. A district certification process is usually a 2 to 3-year process in which the school provides teachers with professional learning, instructional planning support, necessary instructional resources, and arts-related community partnerships. Rubrics are used to define the criteria required for a school to receive district certification in arts integration (see Appendix C) or STEAM (see Appendix D).

Bandura's Self-Efficacy Theory

When a teacher adopts a new pedagogy, the teacher must believe they are capable, and therefore, self-efficacy must result (Tschannen-Moran & Hoy, 2018). Albert Bandura (1997), theorist and renowned psychologist, defined self-efficacy as "beliefs in one's capabilities to organize and execute the courses of actions required to produce given attainments" (p. 3). Bandura's Theory of Self-Efficacy is rooted in Bandura's broader Social Cognitive Theory framework, which establishes that the influences for human behavior include personal factors, environment, and the context of the behavior itself. In Bandura's (1986) Social Cognitive Theory, all of the internal and external factors that humans experience interact in a dynamic manner, and self-efficacy is a major part of this interaction. Much like self-efficacy refers to a human's self-belief, teacher efficacy refers more specifically to a teacher's self-belief in their capability to impact student learning outcomes (Tschannen-Moran & Hoy, 2018).

Teacher Efficacy

Tschannen-Moran et al. (2009) defined teacher efficacy as teachers' self-beliefs in the positive influence they could have on student learning outcomes; they defined the factors that influenced teacher efficacy as being personal (personality), situational (classroom contexts), and

environmental (school culture). Tschannen-Moran and Hoy (2018) and Tschannen-Moran et al. (2009) linked high levels of teacher efficacy with high levels of student achievement. Tschannen-Moran and Hoy associated strategies for higher levels of teacher efficacy with effective professional development, peer collaboration, and goal setting.

In a study conducted by Garrett (2010), teacher self-efficacy in arts integration was measured using a survey tool developed by the Kennedy Center measuring the influences a multi-year teacher training model had on teachers' self-efficacy with arts integration and included five tenets: instructional design, instructional strategies, assessment, collaboration, and learning environment. Furthermore, teachers' general understanding or familiarity with the arts and their teacher training are areas that impact these five tenets of self-efficacy and therefore, will be included in this review of literature as well (Garrett, 2010). To understand teacher self-efficacy, the four sources Bandura (1997) researched must be explained. These four sources that affect self-efficacy include vicarious experiences, physiological arousal, mastery experiences, and verbal persuasion.

Vicarious Experiences and Arts Integration

Vicarious experiences refer to the influence that observing others can have on an individual when appraising one's own abilities (Bandura, 1997). Observing someone else successfully completing a task or goal can increase self-efficacy if the observer can acknowledge his own capabilities through the observation. The similarity between the observer and the model is an important factor to consider because the more self-similar the observer finds the model to be, the more likely that the experience will result in higher self-efficacy (Bandura, 1997). Constructing understanding of the arts often begins with arts integration professional development or teacher training, which is a vicarious experience because arts integration

strategies are modeled for individuals and experienced through observation. Another vicarious experience that usually occurs when constructing self-efficacy in arts integration is developing an understanding of the arts themselves (Saraniero et al., 2014). This section discusses literature on arts integration teacher training and understanding of the arts and how these vicarious experiences shape teachers' self-efficacy in arts integration.

Teacher Training

Arts integration training is typically not included in college teacher certification programs, and therefore, pedagogy requires more specialized in-service professional learning (Duma & Silverstein, 2014). Arts integration teacher training involves vicarious experiences; however, the impact these vicarious experiences have on teacher self-efficacy is often not realized until the teacher is back in the classroom. The literature reveals that a professional development program in arts integration does not guarantee teacher confidence in instructional implementation (Saraniero et al., 2014). Schools and districts aim to offer arts integration professional learning for teachers by typically contracting outside arts organizations through special grant projects (Buck & Snook, 2020; Duma & Silverstein, 2014; Garrett, 2010). Duma and Silverstein (2014) analyzed arts integration research to evaluate its impact on schools in the CETA teacher training program. When Duma and Silverstein examined the design of the partnering arts organizations' support for building capacity internally among teaching faculty, the study revealed that ongoing support of teachers through workshops, modeling, co-teaching, and planning integrated lessons was critical. Another finding indicated that the longer a teacher participated in the CETA program, the more likely that the teacher would develop self-efficacy towards an arts integration pedagogy (Duma & Silverstein, 2014). Considering that the CETA program consists entirely of teacher workshops that demonstrate arts integrative strategies

vicariously and even sometimes include the artist modeling with classrooms of students (Duma & Silverstein, 2014), this aligns with Bandura's (1997) theory that vicarious experiences attribute to an increase in self-efficacy.

Saraniero et al. (2014) analyzed the impact of ongoing coaching on an existing arts integration summer institute program and found that teacher efficacy was higher in teachers who received the support of the coach. Like Saraniero et al., Wilcox et al. (2010) also emphasized the significance of coaching on teachers' implementation of arts integration across the curriculum. The longer the vicarious experiences of training and coaching were sustained for the arts integration teacher, the more likely they would develop self-efficacy using arts integration (Wilcox et al., 2010). Another study conducted by Duma and Silverstein (2014), which advocated for ongoing arts integrative support, examined a particular multi-year CETA arts integration teacher training program. Duma and Silverstein suggested that without the ongoing support of an arts organization providing courses, modeling, and coaching, adopting an arts integration practice can be a challenge. Southern et al. (2020) conducted a study evaluating an art organization's coaching model that included pairing a creative practitioner with a classroom teacher in order to integrate a shared pedagogy for creative writing. Southern et al. also described a hierarchical relationship that formed between the expert art practitioner and the classroom teacher, explaining that neutralizing this partnership would require identifying the factors that potentially hinder the classroom teacher from constructing self-efficacy. More often, teachers need ongoing support when taking new thinking and theories and transferring them into practice (Buck & Snook, 2020). Important to note that Bandura's (1997) vicarious experiences result in higher self-efficacy only if the individual views their self in the modeling. Much of the arts integration research identifies the need for follow-up instructional support following a teacher

training in order to develop high teacher self-efficacy (Burnaford, 2009; Corbisiero-Drakos et al., 2021; Duma & Silverstein, 2014; Garrett, 2010; Southern et al., 2020; Wilcox et al., 2010). If the vicarious experience of strong teacher training does not guarantee transfer into high levels of teacher self-efficacy, there must be a need to explore how teachers self-identify when comparing themselves to the arts integration modeling that they observe and learn.

Understanding of the Arts

When exploring vicarious experiences in arts integration self-efficacy, considering teachers' general understanding of the arts and how teachers self-identify with the various art forms is critical (Marschall, 2022). Marschall (2022) examined the role that self-identity played in shaping a pre-service teacher's self-efficacy and found that self-identity played a significant and dynamic role in understanding self-efficacy. General education teachers who do not identify with the arts often do not feel confident using the arts in their classrooms. Southern et al. (2020) observed low levels of arts integration teacher self-efficacy in a teacher training program that paired artists with classroom teachers and reported teachers not feeling confident implementing instruction because teachers did not identify with being artists themselves. The study conducted by Southern et al. revealed that classroom teachers did not contribute equally to the designing and implementing of the lesson and the visiting artist was perceived as the "expert."

In many cases, teachers fail to construct a foundational understanding of the arts without heavily relying on outside arts organizations to provide the arts experiences for students (Garrett, 2010). Most arts integration grant-funded research studies include a community arts partnership, which usually consists of teaching artists from an outside organization visiting classrooms and working directly with students throughout the duration of the grant (Duma & Silverstein, 2014). When partnering with community arts organizations, Bowen and Kisida (2019) determined that

schools wanted more teacher training in the art forms and art skills to deepen their work in arts education and integration. However, the organizations wanted to raise appreciation for the arts and develop appreciation for their community initiatives to build sustainability and ensure future funding (Bowen & Kisida, 2019). Using a mixed methods approach of survey data and focus groups, the findings concluded that 24 community organization administrators associated their organization's impact with having greater social emotional benefits for students than impacts on student achievement scores and attendance. This study affirms the notion that school administrators are chasing student achievement and student attendance and therefore, affirms why the arts may not be prioritized when considering school initiatives (Bowen & Kisida, 2019). The success of these partnerships depends solely on the organization and school having the same agenda, with impeccable transparency both programmatically and financially.

Garrett (2010) conducted a 3-year mixed methods study through the federal grant program, Intensive Development in Education through the Arts (IDEA), which was a professional learning program for teachers adopting arts integration. Garrett's study examined how the professional learning program influenced teacher efficacy in 38 teachers from five elementary schools. The findings resulted in improved student achievement; however, there were minimal gains in teacher self-efficacy with arts integration, and this was attributed to the classroom teachers being overly reliant on the teaching artists to implement instruction. Without the teaching artist present, generalists did not feel confident enough to facilitate arts integration (Garrett, 2010). Very few studies have explored the inner workings of general classroom teachers developing and facilitating arts integration without the aid of an outside arts organization (Buck & Snook, 2020). In Bandura's (1997) Theory of Self-Efficacy, the vicarious experience of observing the teaching artist would increase self-efficacy in arts integration only if

the teacher viewed themselves as similar. Becoming reliant on the teaching artist to facilitate the instruction, Garrett's resulting teacher efficacy scores indicated minimal transfer into the general classroom teachers' practice.

Just as background experience in the arts can influence teacher self-efficacy, general background in teaching can influence arts integration efficacy (Engelmann et al., 2018). Data from the annual survey on teacher efficacy for teachers participating in the sample district's arts integration training program revealed that the highest mean score for self-efficacy in arts integration was teachers in the beginning of their career with 1–3 years of teaching experience. This finding supported Engelmann et al.'s (2018) work with pre-service special education elementary teachers engaging in arts integration. Although participants initially approached the pre-service education course program with little confidence in the arts, Engelmann et al. found a rise in the social development of pre-service teachers, greater appreciation for the art-making process, and organically discovering ways that the arts could be applied across the curriculum. These findings indicate that teachers less experienced in teaching may develop higher rates of self-efficacy in arts integration because their teaching pedagogy is still forming.

Buck and Snook (2020) associated low rates of efficacy with teachers believing they needed mastery artistic skills to facilitate instruction. Teachers' self-doubt exists when they do not see themselves as similar enough to the modeling taking place (Bandura, 1997). Buck and Snook found teachers to be low in self-efficacy despite teachers knowing that in arts integration, their role is facilitating students in integrating art processes with curricular concepts, which required no artistic expertise on the teacher's behalf. In a study that included coaching pre-service teachers on integrating the arts in science, technology, engineering, art, and math content, Luton (2021) described the possibility of generalists being reluctant about engaging in unfamiliar

art forms due to a lack of basic art understanding. Luton investigated this teacher reluctance by designing a pre-service education course for students to experience arts integration in a non-threatening supportive environment. Both Engelmann et al. (2018) and Luton found success when pre-service teachers constructed a basic understanding of the arts through their college course before implementing instruction with students. For college students, participating in the course and learning how to integrate the arts was a primarily vicarious experience, and this source led to an increase in self-efficacy before implementing instruction with students (Engelmann et al., 2018; Luton, 2021).

Much like the pre-service teaching courses discussed, a school or district's professional learning program must include teachers establishing basic understanding of the various art forms and applications before teacher efficacy can develop vicariously (Garrett, 2010). Although the research discussed self-identity as "teacher and artist" using vicarious examples, there are also instances in which performance accomplishments or mastery experiences play a significant role in developing self-efficacy for arts integration. The next section addresses Bandura's self-efficacy source, mastery experiences, which primarily occur for the teacher when actively instructing and assessing students. A review of the research on arts integration self-efficacy and how it relates to instruction and assessment will be discussed.

Mastery Experiences and Arts Integration

When examining the four sources that Bandura attributes to self-efficacy, mastery experiences are the most influential because they are based on authentic performances of a task or accomplishment where the person can actually determine whether they felt successful (Bandura, 1997). During mastery experiences, if the person achieved the goal and felt successful, self-efficacy increased; however, if the performance accomplishment fell short and the person

did not feel success, self-efficacy could decrease (Bandura, 1997). A decrease in self-efficacy can have a detrimental effect on the individual's willingness to try the task again, and factors such as the size and difficulty level of a task can influence the impact on self-efficacy. Also, if a teacher approaches teaching being imitative, it can have a negative effect on self-efficacy. Marschall (2022) conducted a study specifically examining how mastery experiences related to self-efficacy in pre-service teachers. Marschall found that the mastery experiences only led to an increase in self-efficacy when the pre-service teacher was not imitating something modeled, but instead developing autonomy on how to best design and facilitate the instruction. When considering how mastery experience relates to a teacher's self-efficacy with arts integration, autonomous decision-making on the part of the teacher should be considered. Examining how the teacher makes autonomous decisions in the classroom requires analysis of the existing literature around how mastery experiences using the arts are integrated into instruction and assessment by the teacher.

Instruction and Assessment

Even with a deep understanding of the arts and teacher training, it does not guarantee that a teacher will develop high levels of teacher self-efficacy in instructing arts integration. When designing an arts integration lesson, components of instruction such as objectives, academic standards, procedures, and assessment must be included (Burnaford, 2009). When crafting learning objectives, they must approach both the academic standard(s) and the fine arts standard(s) (Duma & Silverstein, 2014). For example, if students are creating a shadow puppet show to explore light sources, the learning objective must articulate how the creation of the puppets and assembling of the stage and lights will lead to creating shadows in a variety of shapes and sizes. The key to a mastery experience increasing an individual's self-efficacy level is

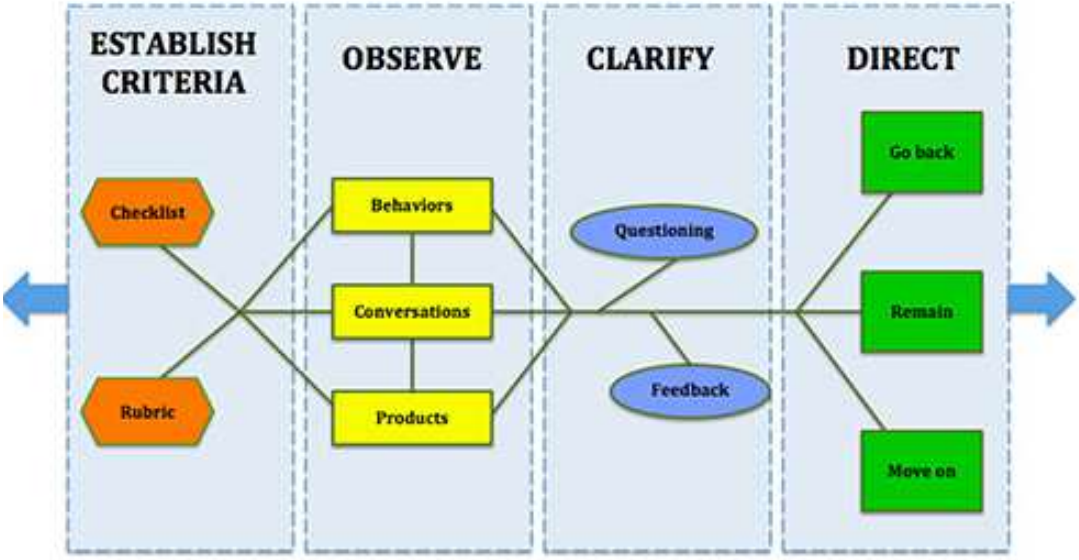
whether they feel like the experience successfully achieves the goal (Bandura, 1997). Articulating the fine arts and the content standards clearly for a particular lesson, as described in the shadow puppet example, can provide the teacher with a clear goal for defining the lesson's success. Promoting arts integrative pedagogy encourages teachers to replace canned prescriptive curriculum with arts-based strategies that bring about creativity (Hipp & Sulentic Dowell, 2019); however, teacher efficacy must develop through these experiences for arts integration to continue to happen in classrooms.

Corbisiero-Drakos et al. (2021) conducted a 3-year, federal, grant-funded study with fourth and fifth grade teachers in which they found that with ample funding, arts integration promoted 21st century skill development in students. Specifically, 21st century skills include creativity, critical thinking, collaboration, and communication. The treatment schools in the study received school-wide arts integration support throughout the school year, while the control schools received access to arts field trips and performances but no ongoing instructional support with arts integration. Corbisiero-Drakos et al.'s analysis of the data evaluating the 21st century skills rubrics administered found that treatment schools engaged in arts integration resulted in a significantly higher rate of 21st century learning than the control schools. This study illustrated that the power of mastery experiences engaging classrooms in "doing" the arts through instruction facilitated by the individual teacher had a greater effect on the learner over a more vicarious experience such as attending a field trip to "observe" a performance. The National Endowment for the Arts and Catterall (2012) not only researched the longitudinal benefits of the arts on student achievement in high school and college, but also the benefits when students become young adults by revealing civic engagement in society such as engaging in community service, voting, and participating in political campaigns.

Instruction and assessment are not the same thing; instruction refers to the teacher-led activities, "the means to a curricular end," and formative assessment is the process intended to make the instruction more effective (Popham, 2008). Although instruction and assessment are different, they are interrelated, and both engage teachers in a mastery experience. Having high teacher self-efficacy in arts integration not only requires confidence in designing and facilitating instruction but also in assessing instruction. For the purpose of this study, I will narrow in on formative assessment and not include summative assessment to determine how assessment relates to teacher self-efficacy when designing and implementing arts-integrated instruction. Although little research on arts integration is directly linked to formative assessment methods, Silverstein (2020) have connected the arts to active engagement by explaining that when formatively assessing, a student must be doing something for the teacher to gather evidence about their learning. When using arts integration, students use the art modalities to express their understanding. Arts integration emphasizes the creative process and not the final product, much like formative assessment is the active process of learning and not the summative end point. Black and Wiliam (1998) emphasized how formative assessment related to student expression when describing the role of formative questioning. Formative questioning requires actively engaging students and encouraging them to express themselves, while closed questions do not advance the thinking nor allow students to express opinions and ideas (Black & Wiliam, 1998). CETA outlines formative assessment during arts integration as having four distinct parts: (1) establishing criteria in the form of a checklist or rubric, (2) observing behaviors, conversations, and products, (3) providing clarity through questioning and feedback, and (4) directing next instructional steps (Silverstein, 2020). As shown in Figure 4, the framework provides a resource for teachers trained by the Kennedy Center's CETA program.

Figure 4

The Formative Assessment Process



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Although the formative assessment framework is explicit, there are limited resources or existing research providing examples of what formative assessment could look like when using arts integration teaching strategies. When using a performative task to assess during the creative process, mastery experiences are being used by both the learner and teacher because the individual is determining whether they have achieved their goal, and as a result, self-efficacy increases or decreases for both the learner and the teacher. Woolfe (2006) studied the use of peer assessment in the context of a middle school dance class and linked students' peer feedback to improving students' analysis skills and also strengthening their own performance. While this research had an arts education focus and not an integration focus, the scaffolding and skills

described can be integrated into many other curricular areas, such as speaking/listening, writing, and close observation. The dance teacher used video clips to help students examine their dance performance critically and more objectively (Woolfe, 2006). In an assignment, students were using dance sequences to tell a historic story and then provide their classmates with peer feedback. The teacher, Ms. Lowe, provided a list of questions and prompts to keep the feedback focused on the dance criteria and objectives. Ms. Lowe expressed that the formative assessment method led to more creative application of the criteria because the directions and expectations were very clear (Woolfe, 2006). Lowe's video on peer feedback in the dance classroom links this formative assessment method to the creative process. Considering how formative assessment relates to the creative process is important because it provides strong scaffolding and feedback to students in each phase they explore in the creative process (Silverstein, 2020).

Physiological Arousal and Arts Integration

Albert Bandura (1997) referred to another source of self-efficacy as being the physiological arousal or emotional state of an individual when performing or anticipating their performance. Managing and regulating emotions effectively can increase self-efficacy, as it demonstrates the individual's ability to cope with challenging situations (Bandura, 1997). When a teacher is feeling stressed, this can be detrimental to the individual's self-efficacy. The same can be true for a teacher who is processing emotions in the classroom while facilitating arts integrative learning, especially if the instructional task feels particularly challenging or uncomfortable.

Arts integration has been linked to social emotional learning, and therefore, it is worth exploring how physiological arousal relates to self-efficacy in this context. Oreck (2006) conducted a study on how teachers used the arts in the general classroom and found the arts to

support the building of a respectful classroom community that fostered flexible thinking, self-control, and teamwork. Casciano et al. (2019), Anderson and Valero (2020), and Becker (2020) examined arts integration and social emotional learning (SEL) competencies with specific groups of learners. Casciano et al. conducted a case study investigating SEL with special education students engaged in arts integration and highlighted how accessible arts integration was for all learners. Casciano et al. determined that this pedagogical approach provided teachers with strategies that effectively increased student engagement, self-awareness, and interpersonal skills that directly affected social emotional growth. Similarly, Anderson and Valero also studied the impact of arts integration on the social emotional skills of students with learning disabilities, and their findings linked gains in both academic vocabulary and SEL when integrating the arts in instruction.

Not only does the research point out the social emotional learning of an arts-integrated approach towards special education students, but Becker (2020) researched the effect of arts integration on students with language limitations or impairments. Becker used visual arts integration and found that students with language impairments thrived in integrating both verbal and visual literacies, which in turn further developed their oral and written language skills. Nielsen et al. (2020) designed a study that determined the positive effect of arts integration on growing a multicultural enriched learning environment where social emotional benefits were observed in students. Whether observing the benefits of using the arts to support diverse learning needs (Becker, 2020) or examining the social emotional benefits (Nielson et.al., 2020), these positive associations with student learning lead to an increase in efficacy on the part of the teacher when integrating the arts.

Managing and regulating physiological responses can increase self-efficacy, and some arts integrative strategies specifically address this source. Nielsen et al. (2020) found an increase in SEL when using strategies, such as nonverbal movement exploration, collaborative partner activities, and generating student reflections through drawing. Similarly, Yanko and Yap (2020) linked their arts integration research to social awareness and peer relationships when studying first grade students integrating music with their exploration of nature. Yanko and Yap discovered a rise in self-regulation when using the arts during the learning experience. Raschdorf et al. (2021) connected social emotional learning to students working collectively to make music for an audience because they had the opportunity to participate in something "larger than themselves" (p. 43). These physiological responses to the arts can increase self-efficacy in students.

Skills such as the development of critical thinking skills, collaboration skills, self-regulation skills, and empathy naturally occur as a result of an art experience (Raschdorf et al., 2021). Student engagement and student collaboration are recurring themes that surface in the presence of arts integration. Casciano et al. (2019) emphasized the social emotional benefits of using arts integration in special education classrooms. Casciano et al. provided professional learning to teachers, training them on a variety of engaging, arts-based activities, including circle games, painting exercises, follow the leader, and ribbon wands. The study resulted in greater student engagement and intrinsic motivation, which translates across other social emotional skills such as self-control, interpersonal skills, and leadership skills (Casciano et al., 2019). The existing literature on arts integration and social emotional learning provides examples of how physiological responses can increase self-efficacy in students but not from the point of view of teachers. This current study aims to determine how physiological responses inform self-efficacy

in arts integration for teachers, specifically around teachers' self-regulatory processes when using the arts to facilitate formative assessments.

When designing arts integration, the design of lesson procedures involves the five stages in the creative process: imagine, experiment, create, reflect, and share (Silverstein & Layne, 2020). Gardiner (2017) associated the creative process with the state of flow in instruction. Gardiner found that student engagement and creativity were dependent upon one another when students were in the state of flow. Gardiner described the state of flow as deep-focused, energy balanced, and not hindered by boredom or anxiety. When teachers are beginning to use an arts integration approach, they similarly are balancing a state of engagement and creativity when establishing a state of flow as an arts facilitator. In a qualitative case study, Gardiner investigated how the state of flow informed student's creativity, engagement, and skill development around playwriting in the classroom. The state of flow is commonly used in the artistic process when creating art, but it can also be characteristic of a teacher who is facilitating the artistic process.

Verbal Persuasion and Arts Integration

Verbal persuasion is another source referring to the influence that the words and actions of others can have on an individual's self-confidence (Bandura, 1997). Receiving positive feedback and encouragement can increase self-efficacy, while receiving negative feedback or criticism can decrease self-efficacy. Crucial is to consider the credibility and expertise of the persuader when considering the influence that verbal persuasion has on self-efficacy (Bandura, 1997). For example, if a teacher is encouraging their colleague to try out an arts integration strategy introduced at a teacher workshop and the colleague respects and trusts the teacher, it will likely result in a positive effect on self-efficacy. Designing arts integration instruction lends itself

to collaboration among teachers, which invites verbal persuasion in the form of positive peer feedback (Hipp & Sulentic Dowell, 2019).

Collaboration

Teacher collaboration is a key tenet of arts integration, and the research implies that the lack of intentional collaboration can have a significantly negative effect on teacher self-efficacy using arts integration (Hipp & Sulentic Dowell, 2019; Purnell, 2004). Hipp and Sulentic Dowell (2019) attributed the lack of time to collaborate and plan to poor organizational leadership. Similarly, Purnell (2004) stressed that lack of administrative support was one of the biggest hindrances to sustaining arts integration implementation in a school. Both Peterson (2021) and Schlaack and Steele (2018) provided an explanation of the important role administrators play in orchestrating the scheduling logistics for teachers to collaborate. Schlaack and Steele researched the effects of an artist residency program with artists visiting classrooms and working with teachers and students, emphasizing the negative effects this program had on classroom teachers' efficacy when there was no planning or collaboration time set aside with the visiting artists. Without strategically setting aside planning time, arts integration may happen in select classrooms where the teacher enjoys this teaching style; however, administrative support is required for it to happen across the campus of a school (Buck & Snook, 2020).

Contrary to the recommendations of Schlaack and Steele (2018) and Peterson (2021) that teachers need intentional collaboration time, Windsor-Liscombe (2016) found teacher collaboration to have a negative effect on teacher efficacy. Windsor-Liscombe conducted a case study examining teacher perceptions in a small, traditional school transitioning into an arts integrative model and revealed that collaboration time sometimes lacked focus and invited negative peer relationships among teachers. Windsor-Liscombe's study resulted in teachers

expressing difficulty trusting one another and working collaboratively, due to the varying levels of teachers' commitment to the arts and the inequities in the workloads that followed. The complexities of collaboration presented emphasize the potential for this tenet to either positively or negatively impact a teacher's self-efficacy when using arts integration. This finding aligns with Bandura's (1997) research on verbal persuasion and the influence the persuader can have on an individual's potential self-efficacy.

Collaboration can happen among grade level or content-area teachers as well as between fine arts teachers and general classroom teachers in a building (Burnaford, 2009). Burnaford (2009) emphasized the importance of collaboration between the arts teacher and the general education teacher. Burnaford examined the art teachers' role supporting general classroom teachers across 59 elementary schools as they integrated the arts into instruction. Burnaford recommended that art teachers push into the general classroom to gain a better understanding of the standards-driven learning goals that classroom teachers addressed in instruction. Examining ways art teachers and general classroom teachers can communicate and integrate their classroom learning goals is key when developing arts integration. For arts integration collaboration to increase self-efficacy using pedagogy, teachers must develop trusting relationships with their collaborators including verbal persuasion experiences. Both Becker (2020) and Krakaur (2017) illuminated the powerful learning that teachers experience when engaging in arts integration, specifically the importance of collaboration between teachers when using this teaching approach. Becker and Krakaur emphasized that students and teachers alike developed collaboration skills when using arts integration. The presence of verbal persuasion is innate when teachers or students collaborate among themselves.

Learning Environment

The learning environment includes both the conceptual and physical space in which a student feels supported in constructing their knowledge (Clark, 2012). Clark (2012) linked collective self-efficacy to designing and implementing a learning environment that prioritized formative assessment. Although Clark's interpretation of the learning environment was not necessarily integrating the arts, he did stress that a learning environment must prioritize students thinking collaboratively and creatively for efficacy to result. Hodson (2018) stated that fostering a learning environment for arts integration required that students feel connected to one another, to the concept being taught, and to the teacher facilitating the lesson. For example, students may work in small groups to demonstrate through dance how the rock cycle works, then they may write a group script that describes how a rock can be transformed into a new rock type. This task requires connection to one another when choreographing and writing, connection to the science concept, and connection to the teacher when rehearsing and performing for feedback. When integrating the arts, the learning environment also refers to the physical space being designed to enable small group work and student collaboration (Hodson, 2018). There also must be a designated physical space in the learning community that is open enough for students to share understanding using the art modalities, for example, a small-group dance or a skit being shared with the class for feedback (Hodson, 2018). Collaboration is a critical tenet of arts integration and therefore, verbal persuasion is also likely to be present among students.

Collaborative classroom environments mirror the intent of professional learning communities designed for teachers who are integrating the arts into their teaching practice (Davies, 2013). Davies (2013) conducted a study with three United Kingdom schools, examining the shift in teachers' professional practice and self-identity when teachers worked together to

plan and create learning environments that emphasized creativity. The findings discussed a shift in the teachers' psyche through the collaboration that occurred among colleagues when growing both their dance knowledge and pedagogical knowledge when engaging in arts integration (Davies, 2013). Davies' (2013) research resulted in teachers viewing the learning environment as being less teacher-centered and reframed their role as being facilitators in the learning environment. Verbal persuasion can also be referred to as peer encouragement, and this was emphasized in Davies' study as participants gained self-efficacy; as a result, they were better prepared to be self-critical and transparent among their team of colleagues that led to continual self-improvement and creativity.

Formative Assessment

To fully understand the benefits of formative assessment, defining techniques that have historically been classified as being formative is critical. When formative assessment does not happen, it is usually because there are misconceptions in how it is defined (Popham, 2008). Assessments that monitor progress throughout the school year, such as district benchmark and interim assessments, are not to be confused with formative assessments because these tools are far too formal and general to be formative (Popham, 2008). Although publishers use the term "formative" liberally, important to note that formative assessment is a process and not a tool, possessing the potential to support students with learning strategies that can be used in the classroom and in the real-world around them (Clark, 2012).

Although formative assessment promotes student learning, it does not always yield higher summative assessment results. Chen and Andrade (2016) conducted a study on the use of formative assessments in elementary visual arts classrooms, and they found far greater growth on performance-based outcomes in the classroom than on constructed response or multiple-choice

traditional summative tests. The incongruence that often exists between formative and summative assessments challenges us to consider the purpose of assessment. Stiggins et al. (2004) described the purpose of "an assessment for learning" as a synonymous term for formative assessment, focused on informing instruction, whereas an "assessment of learning" is summative and focused on the evaluation of student learning. An important differentiator between formative assessment and summative assessment is how the assessment information is used. If the assessment is formative, the assessment information or data collected can be used to advance learning (Brookhart & Nitko, 2018). Rather than analyzing students' scores and strategically planning out next steps, teachers must adjust instruction while concurrently teaching (Popham, 2008).

Popham (2008) defined formative assessment as being a "planned process in which assessment-elicited evidence is used to adjust instructional procedures by students" (p. 7). Stiggins et al. (2004) described formative assessment as diagnosing progress and providing students with feedback that supports students' realization of the learning goal and helps them feel equipped for success on their learning journey. Brookhart and Nitko (2018) emphasized that the intent of a formative assessment was to build upon the strengths of students' varying levels, along with intervening where weaknesses arise. Clark (2012) also associated formative assessment with the intervening required of the teacher when describing formative assessment as the "strategic adaptation of instruction to meet student needs" (p. 211).

Research on formative assessment discusses the impact formative assessment has on the learner. Brookhart and Nitko (2018) associated student self-assessment in the classroom with improving not only student achievement rates but also motivation levels. Similarly, both Chen and Andrade (2016) and Andrade et al. (2014) associated formative assessment with increased

student engagement and students becoming more attuned to self-monitoring and generating higher quality work. Formative assessment requires connection between the teacher and student. Black et al. (2005) discussed the partnership between the teacher and student during formative assessment as a pathway for relating to one another, and this exists because the teacher provides opportunities for the students to play an active role in their learning and sharing of knowledge. Formative assessments result in adjustments being made to instruction by the teacher.

The student is also adjusting and reflecting in the present moment with a clear, well-defined target when formative assessment is happening (Stiggins et al., 2004). Formative assessment is cyclical, meaning the purpose is to provide a feedback loop where students and teachers can aim for a learning target, evaluate how to get closer to the learning target, and then repeat this process until mastery occurs (Brookhart & Nitko, 2018). The ongoing continuous monitoring occurring on the part of the learner during formative assessment (Black et al., 2005; Brookhart & Nitko, 2018; Stiggins et al., 2004) requires evidence of active, engaged learning happening during instruction. Formative assessment as a learning process aligns with the definition of arts integration at its core, which is an approach to learning in which students engage in the creative process, requiring self-assessment, a connection with the teacher, and ongoing feedback.

Backwards Design

An instructional approach that aligns with the existing literature on formative assessment is the discussion of backwards design. Assessing instruction as it is occurring requires that the teacher identifies with their role as a designer of learning (Wiggins & McTighe, 1998). Designing instruction with the end in mind is a process that takes careful planning. Wiggins and

McTighe (1998) described the backwards design process in three stages: (a) identify the desired results, (b) determine acceptable evidence, and (c) plan learning experiences and instruction. The backwards design process as described by Wiggins and McTighe was similar to the formative assessment learning cycle:

1. What am I aiming for?
2. How close am I now?
3. What else do I have to do to get there? (Brookhart & Nitko, 2018).

The first step in the formative assessment cycle requires that the students and the teacher reflect on the end goal, which aligns with the main objective of backwards design. Another core tenet that connects these approaches is the learning targets or criteria for success that determine the student learning outcomes during formative assessment (Brookhart & Nitko, 2018). In formative assessment, the criteria that is driving the cycle is the very criteria that Wiggins and McTighe suggest mapping out before instruction. Both Brookhart and Nitko (2018) and Wiggins and McTighe address being flexible with this criterion as adjustments may need to be made as the instruction progresses.

Formative Feedback

A critical determinant of effective formative assessment is the analysis of student feedback. Formative assessments provide feedback on developmental accomplishments of students as well as clear suggestions for improvement, which provide teachers with useful diagnostic information that can be linked back to classroom instruction (Schumm, 2006). Black and Wiliam (1998) emphasized that feedback was central to formative assessment, and this included effective questioning prepared by the teacher and an assessment open enough to invite multiple responses and divergent thinking from the students. Clark (2012) stressed the

importance of verbal feedback when providing formative assessment, highlighting his observations of Danish education preferring oral feedback to written because it allowed for corrections to be made quickly and on-the-spot when misunderstandings arose.

Sometimes students can rely heavily on teacher feedback to continue onward during instruction. Andersson and Palm (2017) conducted a qualitative study with 22 teachers after participating in a professional learning program focused on formative assessment. The findings revealed that when teachers used formative assessments, there was a reduction in time from the assessment to next instructional steps, the learning tasks were more appropriately tailored to the learners' needs, and students were less dependent on the teacher for feedback (Andersson & Palm, 2017).

When a teacher determines how formative feedback will occur in the classroom, it requires intentional instructional design. Pandero et al. (2018) found the examination of how self-assessments, peer-assessments, rubrics, and exemplars were being included in a lesson was far more important than the presence of these assessments. When considering how these formative assessment measures are used instructionally, The Northwest Evaluation Association (NWEA), a national organization that creates assessments for K-12 students, stresses the need for formative assessment to include clarification of success criteria so that students know where they are heading with the learning (Beard, 2021). Similarly, Clark (2012) emphasized that success criteria should be a conversation between the teacher and the learner. Many teachers are familiar with creating product-focused rubrics that assess a culminating project. However, the notion that success criteria should include learning goals and capture what success looks like in the learning process is less familiar to teachers. The NWEA also stressed that formative assessment should illuminate student thinking, encourage self-assessment, and peer-feedback

(Beard, 2021). Like Popham (2008), Beard (2021) discussed the actionable steps that could be taken in real-time during instruction and how formative assessment led teachers to adjusting learning strategies and next steps for students.

Self-Regulated Learning

The research on formative assessment is often linked to self-regulated learning because the process of providing students with ongoing feedback fosters self-regulation skills (Greene, 2020; van der Linden et al., 2023; Zimmerman & Schunk, 2001). When engaged in formative assessment, there is continuous feedback, and the student is actively responding and adjusting, which requires self-regulation (Greene, 2020). Self-regulated learning is the thinking process that a student engages in when planning a task, monitoring the progress, and then reflecting on how to proceed (Zimmerman & Schunk, 2001). Effective use of formative assessments can culminate in the development of habitual self-regulating skills. Zimmerman and Schunk (2001) emphasized the importance of social contexts when learning, stressing that learning was most effective when students were self-monitoring their progress and feeling in control of their learning environment. A study exploring the connection between self-regulated learning and formative assessment highlighted the importance of teachers creating a continuous feedback loop for their students that went beyond the immediate instructional task in order to develop improved levels of self-regulation in their student (van der Linden et al., 2023). Van der Linden et al. (2023) stressed the need for teachers to receive professional learning and instructional support to construct sustainable formative assessment practices that foster self-regulation. Panadero et al. (2018) defined self-regulated learning as being more focused on cognition and emotional responses and formative assessment being more focused on pedagogical decisions. Also recognizing the strong connection between the two, Panadero et al. conducted research merging self-regulated learning

and formative assessment by developing a model centered around students practicing evaluative judgement in the classroom. The thinking process that occurs when self-evaluating or judging one's performance (Panadero et al., 2018) and sustaining the continual feedback loop (van der Linden et al., 2023) aligns with the dynamic, iterative stages in the creative process (Silverstein & Layne, 2020).

Clark (2012) analyzed a comprehensive collection of sources on formative assessment and also conveyed that formative assessment drives self-regulated learning, emphasizing the active engagement required of the learner. Clark discussed the variety of other ways that self-regulation manifests in a student, stating, "self-regulated students are meta-cognitively, socially, motivationally, and behaviorally active in problem solving processes" (p. 216). These observable attributes in a student will likely have a positive effect on both teacher and student efficacy as self-regulated learning includes a strong presence of self-efficacy (Bandura, 1986).

Traditional Formative Assessment Methods

Before considering how the art modalities can be used as a tool for formatively assessing student learning, a survey of existing formative assessment procedures needs to be considered. Traditionally in education, assessment procedures refer to pencil/paper tests in the formats of multiple choice, true/false, fill-in-the-blank as well as short-answer or essays. These summative tests can take substantial time to administer in a classroom of students and take away from instructional time. On the other hand, formative assessments do not interfere with instructional time, but instead serve as an integral part of the instruction (Popham, 2008). As teachers administer short tests or quizzes that can only constitute as "formative," the feedback must be immediate and a systematic collection of evidence that learning has occurred in the instruction exists (Brookhart & Nitko, 2018). In addition to the challenge of providing timely feedback,

another challenge teachers face when developing effective pencil/paper tests is keeping the assessment concise and short but including enough items to accurately assess the depth of students' knowledge and skills. A traditional formative assessment remedy used by generalist teachers is creating a testlet, which includes a few questions derived from the summative assessment and administered as a quick check-in (Popham, 2008). When formatively assessing, a teacher will not lose instructional time, but instead maximize instructional time, and this proves to be a major advantage of formative assessment.

When examining how the arts relate to formative assessment, exploring how specific formative assessment strategies relate to the various learning modalities is valuable. Pickard (2017) conducted a study that explored the use of visual formative assessments in the form of graphic organizers on a set of classrooms after assessing students' learning style preferences: visual, kinesthetic, auditory, and multiple styles. With the treatment schools, Pickard facilitated a unit of study with visual aids and formative assessments in the form of graphic organizers, while the control group facilitated the same unit of study without the visual formative assessments. The goal of the study was to determine the impact of visual graphic organizers on the different learning modalities. Overall, Pickard found the visual formative assessments to have the most significant impact on kinesthetic learners, indicating that a mixed approach of learning modalities should be used when formatively assessing the variety of learners present in any classroom.

Written responses from the teacher have traditionally been associated with formative assessment in the form of anecdotal notes that are shared with students. Comment-marking is a formative strategy where the teacher engages in feedback dialogue in students' journals, and although this has proven to help, it is often not timely enough (Black et al., 2005). Student

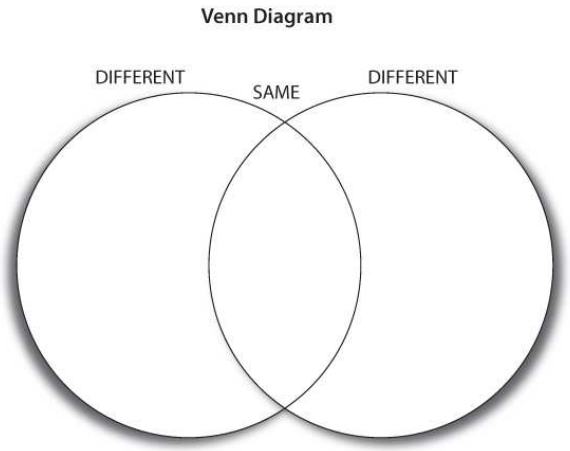
portfolios are used as a traditional formative assessment across all academic subjects by allowing students to examine their growth and progress over a specific period of time (Cornett, 2011). Rubrics and checklists are often used to inform these observations. Written responses are another traditional formative strategy, which can be either structured or informal, and are beneficial sources for capturing students' thinking. Formative assessment can be collected by informal discussion between the teacher and student (Brookhart & Nitko, 2018). Conferencing is another insight to student thinking, and this could also be formal or informal, including oral questions relating to goal-setting and checking in one-on-one with the student (Frey & Fisher, 2011). The teacher's line of questioning when engaging in a formative discussion is critical to assessing what the student does and does not yet understand (Black & Wiliam, 1998). As a teacher constructs open-ended questions, such as "How did you get your idea? Where did you gather ideas?" "How was the ending? What was the best moment? And why?", the questions provide a formative assessment of student learning (Cornett, 2011).

Frey and Fisher (2011) researched a comprehensive three-part plan for formative assessment in the classroom that prioritized students seeing the road map for what they needed to master. This three-part plan is comprised of Feed-Up, Feed-back, and Feed-Forward. It involved the gradual release after substantial scaffolding and teacher modeling and can be referred to as "I do," "We do," and "You do." Formative assessment techniques applied during this system include students journaling, note-taking after mini-lessons, and during collaborative group work, giving each student their own color marker so that when they write on chart paper the teacher knows who wrote what (Frey & Fisher, 2011). This systematic approach is helpful for the teacher because they can then check in with students and ask for clarification or elaboration on the writing. Guided instruction with a clipboard to collect anecdotal notes is another effective

form of formative assessment as well as an effective intervention technique after a formative assessment is being conducted (Frey & Fisher, 2011). Graphic organizers have also become pegged as one of the most applicable ready-made formative assessments for teachers to incorporate into classroom instruction. Teachers often direct students to use graphic organizers to guide their self-assessment of learning (Tankersley, 2005). For example, a Venn diagram is a graphic organizer used to compare and contrast two items (see Figure 5). When students organize their thinking using a graphic organizer, it can lead to insight into the depth of their understanding. All of these formative assessment examples illuminate the traits that make them effective; most importantly, formative assessments inform teachers and students on the learning that is happening during the instruction itself.

Figure 5

Venn Diagram-Graphic Organizer Example



Formative Assessment in the Arts Classroom

Assessing in the arts classroom refers to the assessment of students as they work towards mastery of their grade level specific arts standards, as laid out by the state in which the teacher works. There is a lack of research on assessment in the arts classroom, and this is largely due to

how relatively recent the fine arts standards were developed and adopted at both the state and national level, particularly in the area of elementary fine arts standards. It was not until 1994 that the United States first adopted national standards for elementary fine arts (National Arts Standards, 2024), and in 2020 the full adoption for all art forms was completed in Georgia (Georgia Department of Education, 2023). Without state or national standards in place, assessment in the arts classroom remains largely unexplored.

Although research has been conducted deeming the positive impact of formative assessment on teacher self-efficacy, there is a lack of research on formative assessment for the arts in general. Chen and Andrade (2016) and Andrade et al. (2014) conducted studies on how formative assessment was used in the fine arts classroom. Chen and Andrade's (2016) empirical study examined the role fifth-grade success criteria played in formatively assessing a theatre class. The research discussed how facilitating self and peer assessments routinely led to higher student achievement on the learning outcomes. Similarly, Andrade et al. (2014) researched the impact formative assessment had on visual arts classrooms in grades 3-8 and emphasized an increase in student achievement in the visual arts and an increase in visual art teachers' self-efficacy in developing formative assessments. Andrade et al.'s findings pointed to a shift in teachers' mindset about assessment, establishing less evaluative measures and using assessment formatively embedded in instruction. Woolfe (2006) examined a dance teacher's teaching practice working with middle school boys in the dance classroom and found that she maximized the limited instructional time by leveraging formative self and peer-assessment. The dance teacher used video clips to help students examine their performance and independently realize what improvements could be made (Woolfe, 2006). The dance explained her approach to peer feedback including using a list of questions and prompts to keep the feedback focused on the

criteria and objectives (Wolfe, 2006). In her experience, when the rubric was explicitly explained and modeled, it led to more creative applications of the criteria because expectations were very clear (Wolfe, 2006). Peer feedback improves students' analysis skills, and it also strengthens their own performance. Holdren (2012) conducted an action research study examining the work of high school students creating visual arts to respond to a novel study in a literature course. Holdren's study compared traditional assessments to the use of arts and discussed how the arts invited a multitude of ways to solve a problem, and this could be a challenge when teachers attempted to design an objective assessment. The rubric used in Holdren's study was balanced, including both the art-making process and the literary analysis, and resulted in higher-level thinking skills: metaphoric connections, manipulation of detail, and problem solving. Although this study did not explicitly explore the arts being formative, the discussion emphasized the value integrating the arts has on assessment.

Another form of assessment often used in intermediate level visual arts classrooms is the art critique. The art critique is a learning structure used as a summative assessment to critique a particular art project at the end. Costantino (2015) argued that art critiques could also be powerful as an in-process critique when assessing a student's progress formatively in the visual arts classroom. When the in-process critique occurs in a classroom, it guides students on the creative inquiry process, and in turn, the summative end product improves. Costantino discussed how the in-process critique could be facilitated using a framework that balances students' strengths with opportunities for growth as an artist. When an in-process art critique is facilitated, formative assessment is encompassed including critical components such as peer feedback, self-reflection, and a student-centered learning environment.

Formative Assessment and Teacher Self-Efficacy

Research on formative assessment itself is abundant in the field of education, yet examining how formative assessment can happen using the arts is an underdeveloped area of study. Research studies have linked the use of routine formative assessment to higher teacher self-efficacy (Bruun & Evans, 2020; Xiang et al., 2020). As shown in Table 2, there are a variety of formative assessment strategies specific to the type of classroom a person may enter. The chart outlines formative assessment strategies that might occur in a traditional general education classroom, an arts classroom, and an arts integration classroom at the elementary level. Although there are some overlapping traditional formative assessment techniques that appear in all classroom types, this chart provides examples of how formative assessment differs between classrooms.

Table 2

Formative Assessment Strategies Used at the Elementary Level

General education classroom	Arts classroom	Arts integration classroom
Observations of student participation in class or small group discussion	Observations of students' art-making technique	Observations of student participation in an arts-integrated task
Exit slips or tickets out the door- quick questions that prompt a student reflection at the end of class	Gallery Walks- students view each other's artwork and provide constructive feedback on what they observed	Artistic response- students respond to a work of art and connect it to their understanding of a topic being taught
Teacher and student conferring one on one	Singing assessments- feedback is provided to students after singing a particular song or melody	Movement interpretation- students create movement that interprets a specific topic or idea introduced in core content (ie. science, social studies, ELA, mat)
Self-reflection and peer feedback	Rehearsing and acting out a published play	Drama role-play- students act out a scene or situation in-role as a particular character in a text aligned to grade level standards for core content

Quizzes	Movement assessments- assessment of students' ability to move as directed to the music	Tableau- using their bodies, students create frozen pictures of a particular scene or story using grade level core content standards
Graphic Organizers	Music-Tonal Memory Exercise- a call-and-response assessment of students' ability to sing back a series of notes played	Using various musical rhythms to practice counting in math
Classroom games or simulations	Music composition- students compose a musical melody or rhythm to demonstrate understanding of form	Music composition- students compose a musical melody or rhythm of music that communicates a connecting idea (ie. creating a song to communicate the mood of a poem)

Xiang et al. (2020) conducted a quantitative study focusing on primary teachers in one elementary school and found that the school environment and culture significantly shaped the use of formative assessment practices. When a school culture and learning environment emphasize specific instructional practices, teachers grow more confident in their use of them. Xiang et al.'s study found that teachers with high self-efficacy scores also used more formative assessment because it aligned with the school's overall goals. Similarly, Bruun and Evans (2020) designed a study aiming to raise teacher self-efficacy by encouraging collaboration between teachers and researchers on how to effectively use formative assessment in different educational contexts. Through a complex method of analysis, the teacher groups that emerged clearly needed different supports for approaching formative assessment. This was significant because with different targeted interventions for each group, all teachers could potentially increase their self-efficacy using formative assessment (Brunn & Evans, 2020). Both of these studies stress the relationship that formative assessment has on fostering teacher efficacy by emphasizing the learning environment and teacher collaboration. Both of these areas are tenets also present in the existing research on arts integration teacher efficacy.

Mason and Steedly (2006) conducted research on the effect a rubric had on measuring arts integration by examining seven teachers teaching a variety of disciplines and ages, across five school campuses. Mason and Steedly revealed that teachers' self-efficacy in using a rubric to assess arts integration increased over the course of the study because of the intentionality of using the rubric as an instructional tool. The study aimed to objectively evaluate the quality of the arts integrative task when rubric criteria was used to assess (Mason & Steedly, 2006). Findings highlighted the value of rubrics when evaluating students academically, socially, and cognitively but also emphasized the valuable role a rubric can play when designing the instructional task itself (Mason & Steedly, 2006). Like Silverstein (2020), the framework for developing an arts integrated rubric centered around the creative process. Mason and Steedly studied which factors could be evaluated in a students' final arts integration product when engaging in the creative process stages: imagine, explore, create, reflect, and share. Davies (2013) conducted an arts integration study and discussed the importance of assessments including criteria of what students did and did not meet no matter how creative and innovative the lesson was. The presence of assessment is a cyclical part of the learning process. Mason and Steedly and Davies argued for the importance of arts integration assessment. However, more research is required to gather a deep understanding of when, how, and why the arts can be used to formatively assess student learning in the general education classroom.

DeMoss and Morris (2002) conducted an arts integration study that aimed to explore how arts integration impacted student learning outcomes, specifically cognitively and academically. The study compared students participating in arts-integrated units of study to those students participating in traditional units of study (DeMoss & Morris, 2002). Although the study was not specifically examining formative assessment or self-efficacy, the findings revealed that students

engaged in arts integration improved their ability to self-assess their learning (DeMoss & Morris, 2002). DeMoss and Morris's study focuses on the innerworkings of arts integration on the learner, but more research is needed to explore the perceptions of teachers using the arts to formatively assess.

Historically, arts integration has been linked to higher student achievement data in students K-12, which is a macro view on how integrating the arts can yield higher summative assessment scores (Brouillette & Graham, 2016; Duma & Silverstein, 2014, Ingram & Riedel, 2003; National Endowment for the Arts & Catteral, 2012; Stoelinga et al. 2015; Walker et al., 2011). Walker et al. (2011) researched the relationship between student achievement scores and integrating drama strategies into middle school language arts instruction in four randomly selected schools. Studying the same novels, the control classrooms used traditional teaching methods and the treatment classrooms used arts integrative methods. The findings resulted in higher student achievement and higher attendance in the classrooms that integrated the arts, thus supporting the research that links arts integration to higher trends in summative achievement data (Walker et al., 2011). Generally, arts in education is linked to higher student achievement scores even when the arts education is not necessarily intentionally integrated into the general classroom. Bowen and Kisida (2019) examined the effects of arts education programs by measuring academic growth in other disciplines and found significant gains in standardized writing scores. Despite existing arts integration research verifying the positive summative learning outcomes, the existing research has not yet taken on a micro view examining how the arts are most effectively integrated into formative assessment methods.

Summary

In this chapter, the existing literature on the topic of arts integration is related to the research study's purpose, which is to better understand the lived experiences of teachers with high self-efficacy in arts integration and their perceptions of formative assessment. This chapter defines arts integration and discusses the benefits of this pedagogical approach. Additionally, it provides context on how the four sources of Bandura's Theory of Self-Efficacy, vicarious experiences, mastery experiences, physiological arousal, and verbal persuasion, relate to arts integration teacher efficacy. Throughout this literature review, there is discussion on how the sources of teacher efficacy relates to the tenets of arts integration. The research on arts integration teacher training reveals a strong need for ongoing instructional support and follow-up in order to develop high teacher self-efficacy (Buck & Snook, 2020; Burnaford, 2009; Corbisiero-Drakos et al., 2021; Duma & Silverstein, 2014; Garrett, 2010; Southern et al., 2020; Wilcox et al., 2010). The existing literature on arts integration also associates teacher efficacy with teachers' confidence and level of comfort with the art forms (Duma & Silverstein, 2014; Garrett, 2010). When examining the tenet of instruction itself, discussion of how to construct an arts-integrated lesson includes both academic and fine arts standards, integrated learning objectives, and assessment procedures (Burnaford, 2009; Duma & Silverstein, 2014). Teacher collaboration is emphasized in the arts integration research, stressing the need for intentional planning time being in place for teacher efficacy to result (Buck & Snook, 2020; Burnaford, 2009; Hipp & Sulentic Dowell, 2019; Purnell, 2004; Schlaack & Steele, 2018). The learning environment is an area of focus in the review of arts integration literature and describes the learning environment as being student-centered and the teacher serving as a facilitator of the learning (Davies, 2013; Silverstein, 2020). The four sources of Bandura's Theory of Self-

Efficacy that includes vicarious experiences, mastery experiences, physiological arousal, and verbal persuasion, provides a framework for discussing how the sources relate to the tenets of arts integration required when developing teacher efficacy.

The sources of self-efficacy are explained and formative assessment is discussed including self-regulated learning, which is a core characteristic of formative assessment (Clark, 2012; Panadero et al., 2018; Zimmerman & Schunk, 2001). Existing research on formative feedback is further explained, illustrating the value of oral feedback reducing the passage of time from assessment to next steps instructionally (Andersson & Palm, 2017; Clark, 2012; Popham, 2008). Based on the effective learning outcomes of formative assessment, it is not surprising that researchers have linked the use of formative assessment to higher teacher self-efficacy (Bruun & Evans, 2020; Xiang et al., 2020). There is no existing research that explores how high teacher efficacy relates to integrating the arts when formatively assessing student learning. The research conducted in this project attempts to provide a deeper understanding of the phenomenon of formative assessment using the arts, while also contributing to the research on arts integration teacher efficacy.

In this review of literature, examples of traditional formative assessment methods and art classroom assessment methods are described in order to provide context for the types of methods that could be used in an arts integrative classroom. The research on arts integration and assessment connects the creative process to the overarching cyclical assessment process that takes place in any learning environment (Mason & Steedly, 2006; Silverstein, 2020). Additionally, Davies (2013) emphasized the presence of objectivity in arts-based assessments including measurable criteria. Although Mason and Steedly (2006), Davies (2013), and Silverstein (2020) argued for the importance of assessing arts integration, in order to fully

understand the facilitation of formative assessment in arts integration, the lived experiences of teachers would be explored in-depth.

The current research study will focus on the lived experiences of teachers in a variety of school settings with high teacher efficacy using arts integration. A qualitative research approach will be used to capture the commonalities between individual teachers when experiencing the phenomenon of using the arts to formatively assess student learning during instruction. Chapter 3 will further develop the rationale for the phenomenological methodology and the techniques that will be used to collect and analyze the data. Chapter 3 will explain how the study's design and methods will be approached based on the overarching research objectives.

Chapter III

METHODOLOGY

A phenomenological approach of qualitative research methodology is used to explore the lived experiences of general education teachers in elementary classrooms who use an arts integrative pedagogy. This methodology has been selected to better understand how teachers use the arts to design and implement formative assessment. Additionally, this study explores teachers' perceptions of student learning when using the arts to formatively assess in the elementary general education classroom. The following sections provide descriptions of the methodological procedures used in this study.

Following this introduction, there is a section of this chapter focused on the methodological approach. There are subsections that provide the epistemology, a rationale for selecting an interpretative phenomenological approach, and another section that includes the exploratory questions that guide the inquiry in the study. The third section explains the research procedures and provides subsections with further insight into participant selection, data collection procedures, validity and role of the researcher, data analysis procedures, and ethical considerations. The fourth section describes the study's limitations and is followed by the fifth section summarizing the chapter.

Methodological Approach

A phenomenology design has been selected to guide this qualitative inquiry. Phenomenology emphasizes how people experience phenomena, and the phenomenological approach includes description, then reduction, and finally, an interpretation of the lived

experience (Merriam, 2002). This study seeks to explore the lived experiences of teachers who are highly effective in arts integration and their perceptions of arts-based formative assessment, specifically when designing and implementing instruction. Additionally, the study addresses how elementary teachers with high self-efficacy perceive student learning when using the arts to formatively assess across the curriculum. Albert Bandura's (1997) four sources of self-efficacy will be used to explore and interpret the self-efficacy teachers exhibit towards using the arts for formative assessment in the classroom.

Epistemology

Epistemology refers to the general philosophical orientation of the study (Creswell & Creswell, 2018), and this constructing of understanding informs the study's research design. A phenomenological approach is exploring the essence of the lived experience of a group of people and constructing meaning from it (Patton, 2015), which aligns with constructivism. Constructivism, also referred to as interpretivism, requires that the researcher interprets the participants' perspectives by exploring interactions and social contexts (Creswell & Creswell, 2018). This study uses the framework of Albert Bandura's (1997) four sources of self-efficacy, and these sources positively align with constructivist beliefs (Guangbao & Timothy, 2021). The participants in this study possess high rates of self-efficacy in arts integration, and this study will include constructing understanding around formative assessment by exploring the interactions and contexts among participants.

Rationale for Interpretive Phenomenology

When studying the phenomenon of formative assessment in the field of arts integration, a qualitative approach is fitting because the phenomena is complex and multifaceted. The study aims to not only explore teaching practices but also teacher beliefs, training, and understanding

of the arts. The research question explores the personal experiences and contexts of teachers integrating the arts into their teaching and assessment practices, which aligns with a qualitative approach. The essential key to the nature of qualitative research is understanding how meaning is derived by individuals interacting with their world, which is multifaceted and not measurable (Merriam, 2002). The research question also focuses on understanding "why" and "how" teachers use arts integration in their instructional practice. Qualitative research invites in-depth exploration of motivations and interpretation of meanings (Merriam, 2002).

To understand the inner workings of how the arts are used to formatively assess student learning, the phenomenon of arts integration and its broader context is observed and analyzed. An interpretive phenomenological approach is applied to describe teachers' lived experiences in an arts-integrated classroom and determine the shared essence of this phenomenon when formatively assessing student learning. Patton (2015) referred to essence as both the experience and the interpretation, how we made sense of the world by putting the phenomena together. The focus is on inquiry, and the firsthand experiences of the participants are imperative to a phenomenological methodology.

Husserl (1983) laid the foundation for phenomenology, emphasizing the descriptive nature of experiences as they were lived or perceived. Martin Heidegger contributed to the evolution of phenomenology, emphasizing that understanding was always interpretative and based on the individual's contexts, and as a result, preconceptions and experiences occur in a cyclical manner (Horrigan-Kelly et al., 2016). Interpretative phenomenology involves storytelling with a sense of progression within and across themes (Nizza et al., 2021). By focusing on the phenomenon of formative assessment, the themes that arise are compared among participants. The themes and subthemes that emerge include quotes associated with the theme

and interpretation by the researcher (Nizza et al., 2021). Through the interpretive phenomenological approach, individual experiences of teachers with high self-efficacy in arts integration are deeply explored and interpreted. Understanding the complexities of how the arts are used and the circumstances when teachers are more apt to use the arts to assess student learning over traditional assessment methods requires an interpretative phenomenological approach.

This study captures the perceptions of teacher participants who actively and routinely engage in arts integration with high rates of teacher efficacy. When conducting phenomenological research, the focus is on the commonalities between participants and not necessarily their differences (Patton, 2015). This study aims not necessarily to illustrate how the arts-integration experiences of participating teachers are unique and different, but instead to illustrate ways in which the participants' experiences are similar to better understand the phenomenon of arts-based formative assessment.

Exploratory Questions

The exploratory questions that guide this study are holistic in manner, addressing a variety of data sources. In a methodology that has a phenomenology design, capturing human experiences is fundamental, and this is done by capturing how humans describe, recount, feel, relate, and connect to the phenomena being explored (Patton, 2015). The study is centered around one primary question that explores the experiences of elementary general education teachers and their perceptions of arts-based formative assessment. To better understand this phenomenon, the participants for the study possess high self-efficacy in using arts integration. Teacher efficacy in arts integration includes curricular design and facilitation as well as creating

a collaborative learning environment (Garrett, 2010). All of these areas are further explored through the lens of formative assessment during data collection and analysis.

This primary question is divided into two subquestions that are critical to understanding the lived experience of teachers using the arts to formatively assess. The first subquestion addresses how teachers design and implement arts-based formative assessments. In an effort to capture the essence of the phenomenon, an exploration of why, when, and how the assessment occurred is imperative. The second subquestion explores teachers' perceptions of student learning when using the arts to formatively assess in a general education classroom. When conducting in-depth interviews with participants, exploratory questions are asked to address these research questions and gain perspectives of participants' experience with the phenomenon:

- Example 1: Can you tell me about a time you integrated the arts effectively?
- Example 2: From your perspective, how would you define formative assessment?
- Example 3: What have you observed in your students when you use the arts to assess?

The dynamic cross-referencing of exploratory questions provides multiple entry points that can be referenced when analyzing the data and drawing conclusions on the findings. Findings in qualitative research are gathered inductively by way of themes, categories, and concepts (Merriam, 2002).

Participants

School Selection

For this qualitative phenomenological study, eight elementary schools in one large metro school district receiving district support in the area of arts integration have been selected. This group of schools receive district funding to sustain arts integration support in the form of ongoing district professional learning and supplies needed for arts-based classroom instruction.

School enrollment in this district-funded program requires a commitment from the schools' administrators to involve teachers in professional learning and be actively engaged in obtaining certification in the area of arts integration or STEAM through the district certification process. Once schools receive district certification, next steps include seeking certification from the Georgia Department of Education. Information on the arts integrated certification status of the eight elementary schools taking part in this study is provided in Table 3.

Table 3

Schools' Arts Integrated Certification Status

Participating school	District level certification	GA Department of Education certification
School 1	Arts Integration	None to date
School 2	Arts Integration and STEAM	None to date
School 3	Arts Integration and STEAM	None to date
School 4	None to date	STEM
School 5	Arts Integration	Creative School Award
School 6	STEAM	None to date
School 7	Arts Integration	Creative School Award
School 8	STEAM	None to date

Ongoing instructional support and follow-up is required when sustaining arts integration (Buck & Snook, 2020; Burnaford, 2009; Corbisiero-Drakos et al., 2021; Duma & Silverstein, 2014; Garrett, 2010; Southern et al., 2020; Wilcox et al., 2010), and the district supports schools with this instructional model by providing cyclical professional learning annually. Each year, the new teaching staff hired is required to attend a grade level-specific foundational training program exploring how visual arts, drama, dance, and music strategies can be integrated across the elementary curriculum. The training program includes four full day workshops each quarter

where the eight schools have the opportunity to collaborate with teachers from other schools in the district who teach the same grade level. Additionally, optional full day advanced training workshops are offered to veteran teachers who have already received the foundational trainings in previous years. These advanced trainings usually involve partnering with community art organizations and exploring specific topics such as spending the day at the Center for Puppetry Arts exploring shadow puppetry, which is most beneficial for teachers who already have background knowledge in the foundational art forms. The district funds the substitute teachers required for teachers to attend all of the professional learning program trainings and workshops.

Teacher Participant Selection

The district's participating arts integration schools administer an annual survey for teachers that evaluates their levels of self-efficacy with integrating the arts into their instructional practice, and this data is used to determine the schools' professional learning needs and goals for the coming year. The survey includes Likert-scale responses around five domains addressing arts integration self-efficacy: instructional design, instructional strategies, assessment, collaboration, and learning environment (see Appendix A). As mentioned in Chapter 1, the historic data from the district survey administered in the fall of 2022 had been used to identify potential participants for the study who scored high in the area of using the arts for assessment.

Eights participants from each of the eight elementary schools in the district's arts integration program have been purposefully selected and asked to participate. Selecting eight teacher participants for this study reflects the need for a variety of schools to be represented. Researching specifically eight teacher participants at the eight different schools aims to understand the similarities that exist among the lived experiences when fully understanding the phenomenon.

This intentional selecting of participants is required to ensure teachers possess self-efficacy in arts integration and can address the research question. Identifying and recruiting individuals for the study requires an analysis of the historic survey data conducted by the district and the insight of each schools' leadership faculty. Administrators or instructional coaches at each of the participating eight elementary schools select the teacher participants for the study. The historic data from the teacher efficacy survey informed these decisions; however, additional criteria was used, including school arts integration walkthroughs, classroom observations, and students' learning artifacts. The teachers selected are general education classroom teachers grades 1-5 with at least 2 years of teaching experience at their school. Instructional coaches are eliminated so that the study focuses exclusively on teachers. Table 4 provides the criteria used to select the eight teacher participants.

Table 4

Criteria for Purposive Sampling

Evidence of high teacher efficacy	Qualifying criteria
Overall score on the district's survey	3.2–4.0
Score on the district survey's assessment domain	3.2–4.0
Classroom observation and student artifacts	Observed a pedagogical understanding of arts integration: • Use of an art modality to express understanding of a core curricular concept/skill • Arts vocabulary and standards were used • Students engaged in a creative process

Note. District survey refers to the 2022 Arts Integration Teacher Self-Efficacy Survey.

Data Collection Procedures

Qualitative interviews are conducted virtually on evenings at the beginning of the fall semester. The rationale for hosting virtual meetings during uncontracted hours is so that teachers can talk openly in the comfort of their homes during times when they are not actively teaching or

preparing to teach. When conducting qualitative research, cross-verifying data sources and ongoing inferences occur in an iterative, dynamic manner (Maxwell, 2013). Creswell and Creswell (2018) described qualitative research as not being fixed in a series of sequential steps, but instead involving an interconnected relationship between the different design elements of the study as a whole.

The different methods used for this study include an in-depth, semi-structured, 90-minute interview, a classroom observation, and a follow-up interview. The first in-depth interview includes a set of planned questions intended to guide the discussion (see Appendix E). The interview questions address the tenets of arts integration: instructional design, instructional strategies, assessment methods, collaboration, and learning environment. The questions intentionally address where the source of teacher efficacy resonates and provides context for these experiences. A systematic gathering of audio recordings from open-ended interview questions are recorded digitally and archived by date and time in a digital log. Since the interview is semi-structured, the same questions are not used in every interview, and additional improvised questions are asked by the researcher to enable participants to go deeper describing their lived experience with the phenomenon. Techniques, such as probing, are used to investigate participants' perceptions and specific experiences (Creswell & Creswell, 2018) with how the arts are used to formatively assess student learning in their classroom. This flexibility invites the emergence of data that may not as easily surface when following a scripted identical set of interview questions.

After the first round of interviews with participants, a classroom observation occurs in each teacher participant's classroom when they are actively engaging in an arts-integration lesson. The purpose of the classroom observation is to examine the phenomena: arts-based

formative assessments in the teacher participants' classrooms. The scheduling of these classroom observations is coordinated by the researcher and teacher and is based on the availability and lesson scheduling of the teacher. During the classroom observation, data is collected in the form of field notes and audio recording of the classroom observation. Additionally, visual data of lesson materials are collected, and any accompanying checklists or rubrics are included.

A follow-up interview with each of the eight teacher participants is scheduled immediately following the observation. This follow-up interview takes place immediately within 1 week of the observation in order to clarify and confirm what is observed by the researcher during the classroom observations. This interview also provides an opportunity for the teacher to elaborate on the formative assessment process the teacher experienced with students. A list of follow-up interview questions to guide this process is used (see Appendix F). The interviews are semi-structured and therefore allow for an open-ended exploration of the participants' experiences and perspectives not captured in the list of questions.

Validity

When addressing validity, triangulation of data is used to ensure that multiple sources of data are collected and analyzed to verify one another and ensure that a single conclusion can be reached (Creswell & Creswell, 2018). Triangulation is addressed by collecting multiple sources of data in the form of interviews, classroom observations, and lesson/assessment materials. Another consideration for ensuring internal validity includes the follow-up interview that takes place after the classroom observation; this repeated process affirms observations of the phenomenon (Creswell & Creswell, 2018).

A systematic analysis process is used, and it involves periodically engaging my dissertation research member with support on the data analysis part of the research study. My

research member has an extensive background in the arts and phenomenological methodology. Additionally, I debrief with a fellow educational researcher during the coding process. A purposeful sampling includes only participants with rich experiences in the research question, which ensures thick descriptions and detailed accounts of participants' experiences.

Researcher's Process with Reduction and Reflexivity

To increase the internal validity of this phenomenological study, issues such as personal biases are addressed through a process of reduction and reflexivity (Finlay, 2008). Reduction focuses on the participants' experiences, while reflexivity involves the researcher reflecting on how they think and make sense of their own thought patterns that shape interpretations (Patton, 2015).

In reduction, a bracketing system is used to set aside any personal biases or preconceived notions the researcher possesses relating to the phenomenon being studied (Chan et al., 2013). Bracketing, or epoche, is the term coined by Husserl (1983), the "father of phenomenology," and it is the technique used by the researcher to set aside personal experiences and suspend beliefs when conducting research (Ary et al., 2019). When approaching reduction and reflexivity for this study, reflective journaling is used. Reflective journaling occurs in this study before and after interviews and during classroom observations. Reflective journaling in phenomenology includes capturing the researcher's awareness of beliefs and experiences the researcher brings inside the world of the research (Frechette et al., 2023). Heidegger argued that it was impossible to reduce or set aside all biases as a phenomenological researcher when providing holistic understanding of the phenomenon within its context (Horrigan-Kelly et al., 2016). Therefore, interpretative phenomenology requires an iterative interplay between reduction and reflexivity, described as a dynamic dance (Finlay, 2008).

Pre-interview reflective journaling occurs in the study before data are collected by identifying and writing down my own experiences, beliefs, and assumptions about the research topic of arts integration. By acknowledging these perspectives, a conscious effort is made to set aside my beliefs during data collection. Reflective journaling also occurs during the data collection when conducting interviews as participants describe their subjective interpretation of experiences with the phenomenon. Reflecting on my reactions is especially critical when perspectives are different from my own as the researcher. The goal of bracketing is not intended to remove preconceptions, but instead to acknowledge them (Chan et al., 2013).

Reflexivity, as it relates to the study's analysis, includes reflections of the researcher's professional beliefs as they pertain to each significant finding. When reflecting on my own beliefs as an educator, I realize that a transdisciplinary, arts-integrated approach to classroom learning is my teaching philosophy. I view this pedagogy as more relevant than a teaching approach where subjects are siloed and isolated because of the ever-changing world we are preparing students for beyond their K-12 education.

The researcher plays a critical and primary role in data collection, which can be both advantageous and include challenges. Advantages include the element of using a human instrument to collect data and this instrument's ability to immediately clarify, infer, summarize, and explore unexpected responses (Merriam, 2002). As the phenomenological researcher, I conduct interviews and classroom observations, applying my skills, background knowledge, and experiences to the interpretation of the data.

My teaching background began in the high school theater classroom, and then I later entered the general education elementary classroom. This transition into the general education classroom with a fine arts lens influences how I approach instruction and assessment. I also

currently work as an arts integration specialist, training pre-service and in-service teachers. These background beliefs and experiences are intentionally bracketed during the data collection process (Chan et al., 2013); however, my arts integration experiences are intentionally brought into the analysis and interpretation stage of research. My balanced approach of reduction and reflexivity leads to a fuller exploration of the teachers' lived experiences with using the arts to formatively assess students.

Data Analysis Procedures

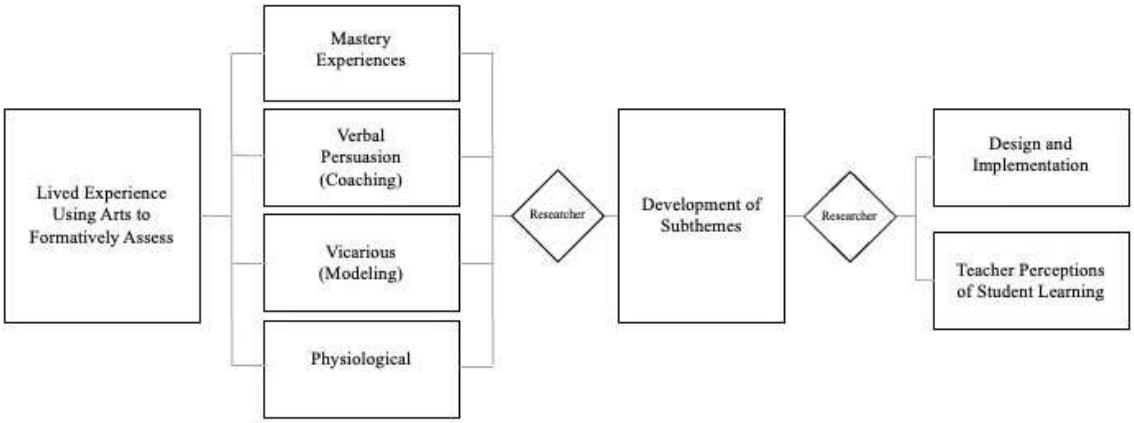
After gathering the data that explores the lived experience of classroom teachers integrating the arts, a process transpires to analyze the data. For the qualitative interviews and classroom observations conducted, audio recordings are transcribed, and I review the transcriptions by reading them multiple times for familiarization (Creswell & Creswell, 2018). The objective of familiarization is synthesizing the data, before narrowing in on the various parts. Narrowing in on which parts of the data need focus and which parts can be disregarded is called winnowing in qualitative research (Creswell & Creswell, 2018). When winnowing the data in this phenomenological study, the focus is on finding commonalities between the different participants and their experiences with their diverse populations that addresses the phenomena being investigated, which is formative assessment in an arts-integration classroom.

The study's theoretical framework is integrated into the data analysis. The first layer of data analysis includes organizing and classifying the data using Albert Bandura's (1997) four sources of self-efficacy as broad themes: mastery experiences, verbal persuasion, vicarious experiences, and physiological arousal. The process of classifying the data by Bandura's four sources constructs an understanding of how the teacher participants develop efficacy in assessing arts integration.

The second layer of the data analysis is specific to the phenomenology research methodology and focuses primarily on coding significant statements about the phenomena of interest (Creswell & Creswell, 2018). Once the data is classified in the four sources of self-efficacy as broad themes, coding occurs to identify patterns and subthemes emerge (see Figure 6). This coding includes analyzing the interview transcripts, visual data of lesson materials, and fieldwork observations. The subthemes that emerge are nested within the broad themes of Bandura's (1997) sources of self-efficacy: mastery experiences, verbal persuasion, vicarious and physiological arousal. Throughout the process of coding and data analysis, any significant findings that address the research question and do not relate to Bandura's broad themes are also acknowledged.

Figure 6

Coding Using Bandura's Four Sources of Self-Efficacy



Ethics

The study's potential benefits to the field of education are communicated to participants; however, when collecting qualitative interview data on teacher efficacy, there are some potential risks. Informed consent is imperative, which means that participants are made fully aware of the

nature of the research, the purpose of the study, their role in the study, and any potential research benefits that may result.

In this interpretative phenomenology, teacher participants are asked to share personal experiences, reflect on their teaching practice, and interpret their perspectives. The relationship between the researcher and participant is deeply collaborative and requires transparency when engaging in dialogue (Creswell & Creswell, 2018). This relationship could potentially threaten the participant's response or willingness to openly share experiences, especially if the participant feels negatively about an experience. The participants know me professionally as being experienced and knowledgeable on the topic of arts integration. I conduct the interviews reminding participants that my goal is to reach a deeper and fuller understanding of their unique perspective of arts integration in their classroom. Their experiences are unique from mine, and how they perceive arts integration in the context of their classroom is valuable insight in order to capture the essence of this particular phenomenon around using the arts to assess student learning. Important is to acknowledge any potential conflicts of interest that could exist. Because the study's sampling is purposive, the teacher participants selected are not close personal friends. However, as the researcher, I know the teachers professionally and have interacted with them at various professional learning workshops I have either attended or facilitated.

A Participant Consent Statement is read aloud and audio-recorded before each participant interview commences to ensure the confidentiality and privacy of participants by protecting their identities and keeping their data confidential (see Appendix G). The statement communicates the use of pseudonyms and storing transcripts and audio recordings in a secure online, password-protected platform. Participants have the option to withdraw from the study at any point, without penalty. The Participant Consent Statement addresses the study's purpose and procedures,

including a brief discussion of the role of the participants. Additionally, potential benefits of the research are communicated in the Participant Consent Statement. The Institutional Review Board (IRB) ensures that research with human subjects is conducted ethically and protects the rights of participants. The IRB for Valdosta State University and the school district in which the study takes place review the study's design, procedures, risks, benefits, and informed consent before granting approval for any data collection to occur (see Appendix H).

Summary

Phenomenology is a valuable methodology for this study because it allows for an exploration of subjective experiences of individuals using arts integration in their classroom. A phenomenological approach provides a rich interpretation of the lived experiences of these teachers and specifically how they use the arts to assess student understanding in their classroom. By including a purposeful sampling of teachers with high-self efficacy and analyzing the data using Bandura's four sources of self-efficacy, the research illuminates what constitutes an effective approach to using the arts to formatively assess classroom learning. The next chapter in this dissertation presents the findings of the study. Chapter 4 describes each of the eight participants, their experiences around the phenomenon of using the arts to formatively assess student learning, and a description of the themes that emerge from the coding.

Chapter IV

FINDINGS

Restatement of the Purpose

The purpose of this study was to explore the lived experiences of teachers with high self-efficacy in arts integration and their perceptions of formative assessment. The study analyzed the experiences of eight teachers with high teacher self-efficacy in arts integration. The data collected included in-depth interviews and classroom observations with participants that resulted in the development of common themes. The classroom observations served as a shared experience between the researcher and the participant and resulted in deeper conversation around how formative assessment occurred in the context of the classroom lessons. The data collected provided further insight into the key areas of teacher efficacy: instructional design, instructional strategies, assessment methods, collaboration, and learning environment. The themes that emerged through the data were framed using the theoretical framework selected for the study. The intent of the study was to better understand the influences of teacher self-efficacy as defined by Albert Bandura's four sources: vicarious experiences, mastery experiences, physiological arousal, and verbal persuasion (Bandura, 1997). The interplay of Bandura's sources and the tenets of arts integration resulted in an analysis of the phenomenon of using the arts as a formative assessment method in the elementary classroom.

The research seeks to answer the primary research question: What experiences do elementary general education teachers with high self-efficacy in arts integration have using the arts to formatively assess student learning? The study provides further insight by addressing the

subquestions: (1) How do teachers with high self-efficacy in arts integration design and implement formative assessment? and (2) What are teachers' perceptions of student learning when using the arts to formatively assess in the elementary general education classroom? For this interpretive phenomenological methodology, the lived experiences of these eight elementary teachers were examined specifically when engaging in arts integrated instruction.

Introduction

The findings of this study are organized in this chapter by first presenting a section on each participant in the study. Qualitative research captures stories to understand people's perspectives and experiences (Patton, 2015). The purpose of these sections is to provide stories on each participant and their respective school to provide an overall context. The participant's school, background, class, and observation of formative assessment are included in each story.

The next section of the chapter addresses how participants define formative assessment and how their beliefs around formative assessment relate to their experiences using arts integration. The final section of Chapter 4 presents the themes and subthemes that developed. Through data analysis procedures discussed in Chapter 3, subthemes emerged using Albert Bandura's four sources of self-efficacy, including the following broad themes: mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal. Each source of self-efficacy or broad theme is presented and followed by subthemes. Subthemes included differentiating for diverse learners, role of rubrics and checklists, backwards design for assessment, learning environment, student engagement, student thinking, teacher collaboration and professional learning, student collaboration, teacher peer interactions, classroom interactions, teachers' growth mindset, social emotional benefits of art, and immersion in the creative process.

Teacher Backgrounds

In order to address the research question, exploring each participant's background and teaching beliefs was critical in understanding their approach to formative assessment. Demographics of the participants varied for the study (see Table 5). All participants were assigned a pseudonym. The eight participants consisted of seven women and one man, all of whom were certified teachers in elementary education. Participants' teaching experience ranged from 2 years to 28 years and the grade levels taught ranged from grades 2 through 5. Five of the eight participants in the sampling had 8 to 15 years of experience with classroom teaching, which is the average mid-point in a teacher's career. These teachers were familiar with their instructional preferences and have been exposed to a variety of curricula, students, and methods. Although this mid-point of a typical teaching career was a characteristic of five of the participants, there was still a notable spread in the sampling's number of years.

Table 5

Participants' Demographics

Participant	School	Gender	Years teaching	Grade level
Calvin	School 1	M	2	5
Cecille	School 2	F	20	4
Donna	School 3	F	15	4
Fiona	School 4	F	8	4
Louisa	School 5	F	10	3
Marta	School 6	F	9	2
Paula	School 7	F	9	4
Trisha	School 8	F	28	3

Note. n= 8

Calvin

School 1

School 1 is a Title I school, and the population is predominantly low income and supported by the federal education program; schools qualify for Title I based on percentage of students receiving free or reduced lunch (Georgia Department of Education, 2023). Of the 653 enrolled students, 52% are Black, 37% Hispanic, 8% White, 4% two or more races, and less than 1% Asian (Georgia Department of Education, 2023). School 1 has been receiving professional learning support from the district in the area of arts integration for 4 years and was awarded its district arts integration certification in spring of 2024.

Calvin's Background

Calvin has a total of 2 years of classroom teaching experience and both of those years were teaching fifth grade at School 1. When Calvin reflected on his background in the arts, he began by describing his involvement in middle school and high school band as a student. He described how this initially led him to wanting to be a professional musician, "I was actually going to be a music major and then I did that for about a year and realized playing the trombone was not my life's passion." He then shifted to a degree in elementary education. He also explained growing up with an aunt who was a high school visual arts teacher who influenced his passion for visual arts as a child. Calvin did not pursue any formal college coursework or adult training in the arts once he embarked on his pursuit of an elementary education degree; however, he credited his desire to use music and visual arts in his classroom to his personal background with the arts as a child. The first time Calvin was exposed to the pedagogy of arts integration was attending the district's professional learning when he was student teaching at School 1 before being hired as a fifth-grade teacher.

Calvin's Class

At Calvin's school, students were clustered according to criteria when considering class placements in fifth grade. Last year Calvin taught the cluster of English as Second Language (ESL) students, and this year, he taught the cluster of Gifted students. He described, "from last year to this year, I have worked with two very different levels of learners, but I have experienced how arts integration can be generally applied to all students." Calvin elaborated on how teaching these different groups of students made him realize how he could use the same arts-based strategy and level it differently with simple modifications for differentiation and tiering to occur.

Calvin's classroom was immaculately organized with tall vertical bulletin boards displaying anchor charts that outlined the learning concepts being taught for each content area: math, reading, and writing. The environment was welcoming with a small disco light rotating and rainbow stringed lights framing the upper borders of the walls. Desks were arranged in two diagonal rows, left and right, and each row included four to five desks clustered in small groups. The diagonal rows framed a "stage" playing area for students, which featured a wooden platform students stand on when sharing out their arts-based learning (see Figure 7).

Figure 7

Stage for Classroom Performances

Note. Students used this stage to perform and present arts integrated projects.

Observation of Formative Assessment

During Calvin's classroom observation, students were exploring cell organelles and demonstrating their understanding by creating a dramatic monologue that personified a cell organelle. He began the lesson by reviewing the project rubric for the monologue performance (see Figure 8).

Figure 8

Rubric for Students' Cell/Microorganism Monologue

[redacted] Presentation : Cell / Microorganism Monologue

	1	2	3	4
Cell/Microorganism Understanding S5L3 and S5L4	My monologue gave 0 clues to help the audience identify the organelle/micro-organism that I represented	My monologue gave 1 clues to help the audience identify the organelle/micro-organism that I represented	My monologue gave 2 clues to help the audience identify the organelle/micro-organism that I represented	My monologue gave 3 clues to help the audience identify the organelle/micro-organism that I represented
Character voice and interpretation TAES.3	I did not make clear vocal choices and therefore was unable to understand my representing my organelle/micro-organism .	I became a character to represent my organelle/micro-organism with a partially developed strong voice using diction, pitch, and volume. (Using 1/3)	I became a character to represent my organelle/micro-organism with a mostly developed strong voice using diction, pitch, and volume. (Using 2/3)	I became a character to represent my organelle/micro-organism with a fully developed strong voice using diction, pitch, and volume.
5.S.L1C	Did not show present or share to any guests.	Presenter struggled to stay focused on their presentation.	Presenter was focused on their presentation, but not the entire time.	Presenter stayed focus on their presentations. Was on task and engaged.

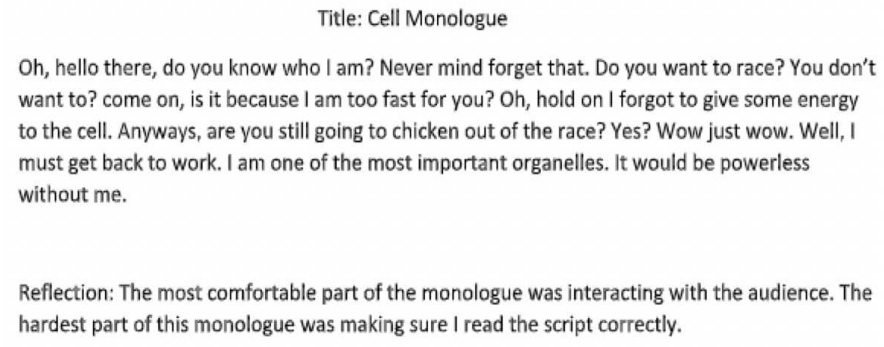
Presenter:
Comments:
Total Score: / 16
Grade:

Note. Students used this during classroom instruction to receive and discuss their feedback.

Before the lesson observation, students had written monologues for their assigned organelle (see Figure 9). A monologue is an active, one-person scene and first-person account of a situation. On the day of the observation, students were performing their monologues for their classmates for the first time onstage.

Figure 9

Student-written Monologue Depicting a Cell Organelle



Title: Cell Monologue

Oh, hello there, do you know who I am? Never mind forget that. Do you want to race? You don't want to? come on, is it because I am too fast for you? Oh, hold on I forgot to give some energy to the cell. Anyways, are you still going to chicken out of the race? Yes? Wow just wow. Well, I must get back to work. I am one of the most important organelles. It would be powerless without me.

Reflection: The most comfortable part of the monologue was interacting with the audience. The hardest part of this monologue was making sure I read the script correctly.

After each monologue performance, Calvin directed students to use whiteboards to guess the organelles as each student performed. When a student was hesitant to perform, Calvin would stand and shout in a friendly tone, "Full respect!" and the class would echo him. This choral cheering was clearly a class ritual that students engaged in often.

Calvin also facilitated a class discussion after each performance to formatively assess both the performer and the audience members' understanding of the organelle and its function in the cell. The formative check-in informed Calvin about students' mastery of the science standards but also provided an opportunity for him to give students feedback on their dramatization and speaking skills. About halfway through the performances, he hopped on a chair and interrupted students by shouting, "INTERMISSION!" He directed students to turn and talk to their partner seated next to them. He said, "I want you to turn and talk to your partner about what you have noticed happening with these performances. What are some things the performers did well?"

After the student performances concluded, students were asked to write a self-reflection and video record their monologue using an iPad. While students were working on these tasks, he

was conferring with each student on his evaluation of their performance using the rubric. He provided students with feedback, such as “Okay, great clues in your writing. Also loved your energy and the pace in which you performed it. The only thing I would suggest is to not repeat yourself too many times. Are their different ways to say that one line?”

Cecille

School 2

School 2 is a Title I school with 754 students and racially comprised of 48% Black, 39% Hispanic, 7% White, 4% two or more races, and 1% Asian students (Georgia Department of Education, 2023). The school had been receiving professional learning support from the district in the area of arts integration and STEAM for 6 years. The school received its district arts integration certification in spring of 2023 and STEAM certification in spring of 2024.

Cecille’s Background

Cecille had been teaching at School 2 for a total of 12 years and currently teaching fourth grade. Cecille, a veteran teacher who has taught in the classroom for 20 years, was originally from South Central Los Angeles. She described having a theatre and film background as a child growing up in California: auditioning for TV commercials, having lead roles in church plays, and participating in speech competitions at a young age. Although she described a rich background in the performing arts as a child, she described leaving the arts behind when she first became a teacher, “I think I kind of let the arts go once I got to college and decided I wanted to be a teacher. But I'm sure if I knew then what I know now about how important the arts are in my teaching, I probably would have gone more in an arts direction with my adult training.” She did not participate in any formal arts training or higher education course work until her school began providing teachers with professional learning in the area of arts integration.

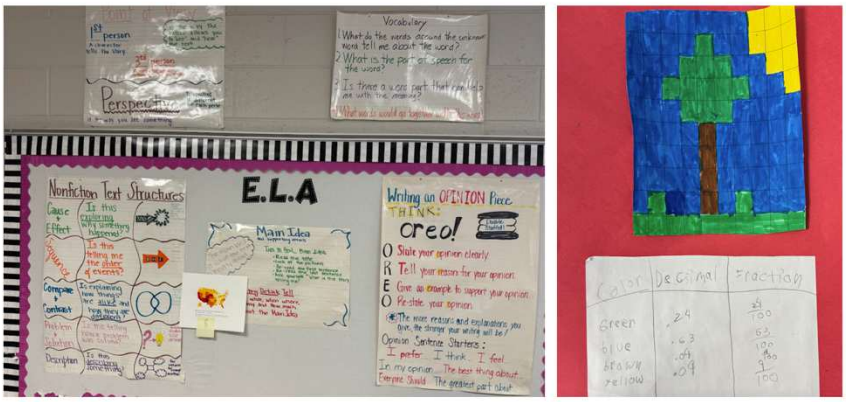
Cecille's Class

Cecille has been teaching the fourth-grade students that qualify for Accelerated Curriculum (AC) at her school for 4 years. To qualify to teach the AC students, the general classroom teacher must be Gifted Endorsed. Obtaining a gifted certification requires completed coursework from an educational authority recognized by Georgia's Performance Standards Commission (PSC) (Georgia Professional Standards Commission, 2023). Cecille linked her arts-based instruction and assessment to meeting the needs of AC standards stating, "Arts integration checks off a lot of boxes, especially with the creative thinking that happens. A lot of the higher-level thinking that is required to analyze and create art is great for my higher learners."

Cecille's physical classroom was arranged with students sitting in a desk formation that enabled small group collaboration for her 24 students; there were three desk clusters of eight facing the center of the room. The walls were text-rich with anchor charts and student work (see Figure 10). The work provided evidence of arts integrative learning happening in various subject areas. For example, the environment included a corner of artwork showcasing students exploring fractions and decimals through the use of colored units on grid paper.

Figure 10

Text-rich Walls with Anchor Charts and Student Work



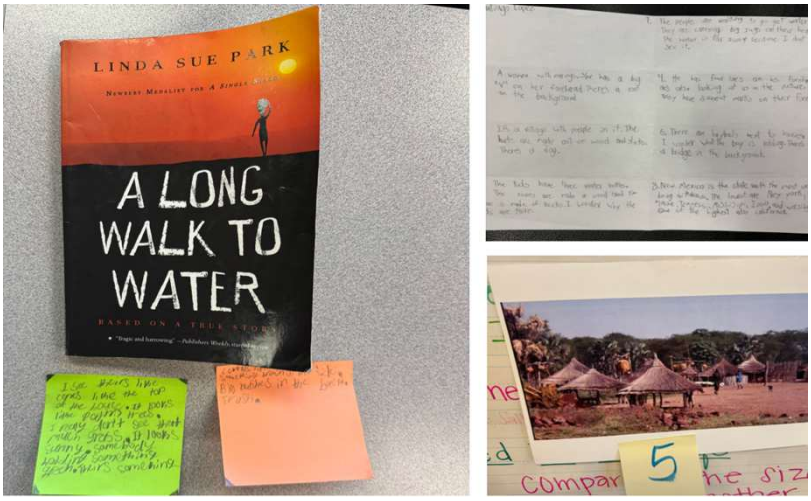
Observation of Formative Assessment

In Cecille's fourth-grade classroom, they were reading and analyzing the text *Long Walk to Water* by Linda Sue Park. During the classroom observation, Cecille started by conducting the Artful Thinking Routine "Ten Times Two," which involved students responding to a photograph from the text and making a list of 10 details they observed. Students used sticky notes to respond to the photograph for 2 minutes. Then the teacher reset the timer and asked students to find 10 new details without repeating any of the previous details. This strategy allowed the teacher to formatively assess students' inferencing skills.

After this whole group instruction, teachers placed students in smaller groups and provided instructions on writing and recording a podcast from the point of view of various characters from the text. The teacher was animated and walking around the tables assisting students. Her rapport was palpable, and the students were responsive to her directions. Students worked in small groups to create their script referencing their text and sticky notes before recording their podcasts using iPads (see Figure 11).

Figure 11

Students Responded to Photograph with Artful Thinking Routine "Ten Times Two"



Note. Students used their sticky notes to respond to the photograph and create a script for a podcast inferring what the characters from the story were thinking and feeling during various major events.

Donna

School 3

School 3 was a Title I school. The total enrollment was 952 students and racially comprised of 40% Hispanic, 37% Black, 14% White, 6% two or more races, and 3% Asian students (Georgia Department of Education, 2023). The school provided a dual language immersion (DLI) program option for students K-5, which meant students were immersed in both Spanish and English, receiving instruction in both languages throughout the school day (Georgia Department of Education, 2023). The school had been receiving professional learning support from the district in the area of STEAM and arts integration for 4 years. This school was awarded a district STEAM certification in 2022 and then a district arts integration certification in 2024.

Donna's Background

Donna, a veteran teacher of 15 years, had been teaching at School 3 for 10 years total. When Donna discussed her background in school, she described growing up attending a Montessori schoolhouse nestled in the woods with only 16 students in a class of two combined grades all the way until ninth grade. She reflected, "I got a lot of individual attention, a lot of leeway, a lot of freedom. I had a lot of creative ability to explore things in ways that I don't think traditional public school students get." Donna's background in the arts included no formal training as a child or adult; however, she did recall a few childhood experiences participating in school and church musicals. When Donna was a pre-service teaching student in college, she was required to take two arts-related courses, a theatre elective course and an arts in education course, which she described as being her first introduction to arts integration in the elementary classroom.

Donna's Class

Donna's fourth-grade class was a very diverse group of students of all levels enrolled in the dual language immersion program. Donna taught one of her classes of students reading, writing, and math in English, while her partnering teacher taught social studies and science in Spanish. Together, the two teachers shared the two classes of students, and they worked closely together to reinforce the vocabulary and content. This focus on vocabulary was evident through the word walls across all of the subject areas. Donna also had the STEAM engineering/design process prominently displayed (see Figure 12).

Figure 12

Design Process Prominently Displayed in the Classroom

Donna's classroom was bright and colorful, including evidence of hands-on learning through the labeled baskets and bins storing art supplies, instruments, and math manipulatives. STEAM composition journals were visible and full of sketches, notes, and reflections. Desks were arranged in groups of five and the groups were referred to as table groups, indicating that they work in these specific groups.

Observation of Formative Assessment

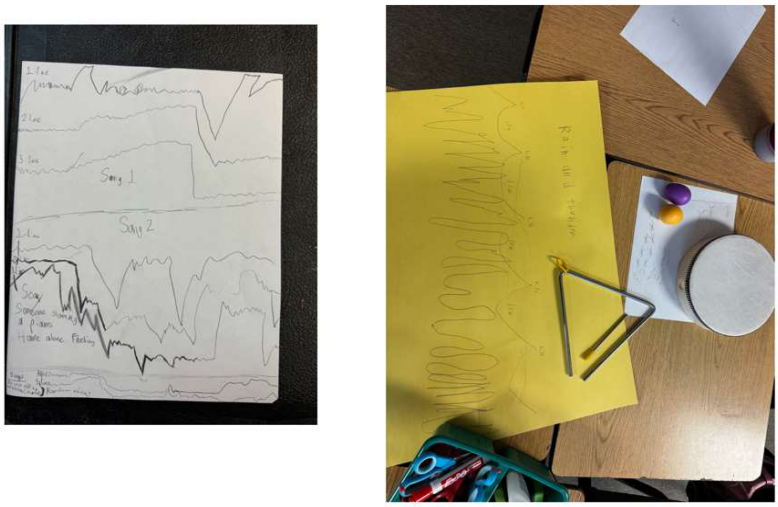
During Donna's classroom observation, students created soundscapes, which were musical scores depicting a particular environment and mood through sound generated using musical instruments and found objects (see Figure 13). The lesson began with introducing the science and music vocabulary used in this lesson. After this direct instruction, Donna directed students to critically listen to the sounds of various types of precipitation during the water cycle. She played excerpts twice, and the second time, students were asked to sketch and take notes on what they heard using both music and science vocabulary. The final part of the lesson involved students working in small groups to compose a soundscape. During this independent work,

Donna traveled around the classroom asking groups questions like, “Why did you chose that instrument for sleet? What would the tempo and pitch sound like for that type of precipitation?”

Students created soundscapes and also included lyrics in their group performance based on the type of precipitation that the group was assigned to explore. The lyrics integrated the science vocabulary introduced at the beginning of the lesson. This formative task assessed students’ understanding and application of the concept of precipitation and its various forms.

Figure 13

Critical Listening to Weather Sounds



Note. Students listened critically to various sound excerpts depicting different types of precipitation (*i.*e. rain, hail, snow) and then took notes on what they heard.

Fiona

School 4

School 4 had a total enrollment of 770 students and racially comprised of 66% White, 14% Black, 8% Hispanic, 7% two or more races, and 6% Asian (Georgia Department of Education, 2023). The school was STEM certified by the Georgia Department of Education in

2015, and in an effort to earn STEAM certification, it had been receiving professional learning support from the district in the area of STEAM and arts integration for the past 3 years.

Fiona's Background

Fiona taught in the elementary general education classroom for 8 years, and all of these years have been at School 4. When reflecting on her background in the arts, she expressed gravitating to the visual arts because of her experience communicating with her younger brother with special needs: "My sibling was nonverbal for about the first six years of his life. Art was the one way that he and I were able to connect…he did art therapy." Fiona also described being involved in a drama program throughout elementary grades because there was a full-time drama teacher at her school. She credited this experience to later successes in a speech course she took in intermediate grades. When Fiona eventually went on to pursue a teaching degree in college, she took a lot of visual arts-related courses, explaining, "In my university, I did the required arts with elementary students which was an introductory arts education course. I went above that and took applied arts with pottery and drawing."

Fiona's Class

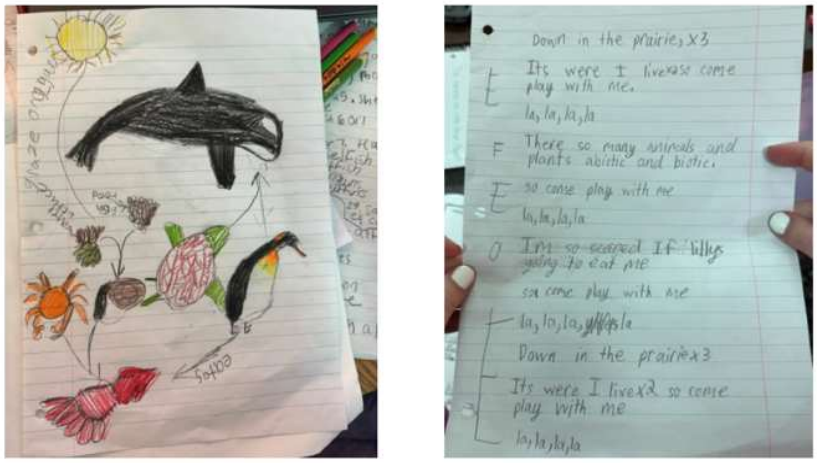
Fiona teaches fourth grade, all core subject areas, and her general education class consists of 24 students. Her physical classroom was designed using workstations and a combination of tables and desks formed flexible workspaces for students to collaborate. The organization systems for group work procedures were visible through her labeling of drawers, shelves, and baskets. In these places, students could find art-making supplies, texts, and composition journals. The room was colorful, including visuals of the engineering/design process and evidence of past STEAM learning projects. Designated storage areas presented projects in-progress that were integrating mathematical arrays and visual arts.

Observation of Formative Assessment

Fiona's fourth-grade class engaged in a project-based learning design to explore ecosystems that aligned with their school's STEAM focus. The classroom observation included small groups working collaboratively on a variety of tasks. Students were grouped according to their preference on Fiona's choice board, and the options included creating a script and dramatizing a scene, creating a stop motion movie, or creating a three-dimensional mini museum using model magic clay. Students used the project criteria assigned to the various choices laid out by the teacher. Fiona used these performance-tasks to provide ongoing formative feedback to students (see Figure 14). While students were working, Fiona circulated the room checking in with groups and asking probing questions that related to their understanding of ecosystems. For example, "Where does your animal get his energy from?" Fiona also checked in with groups to determine which group member was taking on which job.

Figure 14

Student Work in Various Choice-Driven Groups



Note. Students sketched on paper before sculpting ocean animals for their mini museum, and students created lyrics for their song before rehearsing their scene about a prairie ecosystem.

Louisa

School 5

School 5 was a Title I school and had a total enrollment of 411 students and racially comprised of 70% Hispanic, 22% Black, 3% White, 3% two or more races, and 2% Asian (Georgia Department of Education, 2023). The school had been receiving professional learning support from the district in the area of arts integration for 7 years. In 2020, the school received district certification in arts integration and was awarded the Creative School certification by the Georgia Department of Education.

Louisa's Background

Louisa had been a general classroom teacher for 10 years, and all of those years have been at School 5. Louisa credited no specific experience from childhood or format training that she would consider being a background in the arts. When reflecting on why she used the arts in

her classroom, she stated, “I just feel like my mind works in a creative way. And so I just really love coming up with ideas to create art in the classroom, but I have no kind of background in it.” Louisa’s college course work in teacher education only required one arts-related class, which was a music appreciation class. Louisa’s experience with arts integration began 7 years ago when her school began receiving district training in an effort to choose a new school instructional approach. She reflected on when her school began receiving professional learning in arts integration: “At my school, especially with the ESL population that I have, they don't learn the same way necessarily as other kids do and they don't have the same experiences to draw on.” Louisa described arts integration as cultivating shared experiences for her students.

Louisa’s Class

Louisa’s third-grade class is predominantly ESL students. The classroom was set up with three large rectangle tables and then a large open space with an area rug. There was a kidney table in the back corner where the teacher led reading groups. There was a dry erase board hanging over her kidney shaped table that was labeled “Wonder Wall,” where students jotted down what they were wondering while they read with her. There was an art station fully stocked with art supplies. There was a bulletin board up titled “Awesome Authors” with sheet protectors showcasing student writing. There were also some anchor charts throughout the room, including a chart about the writing process and another visual, Word Wall for the Elements of Visual Art (see Figure 15).

Figure 15

Word Wall for the Elements of Art

Observation of Formative Assessment

In Louisa's third-grade classroom observation she was directing students to compare and contrast the plots of two books in a book series by the same author. She was using *Rotten Red Head Older Brother* and *Rotten Richie and the Ultimate Dare* written by Patricia Polacco. She was approaching this reading standard using the drama-based strategy tableau. A tableau is a frozen picture or scene in a story created by actors using their bodies to depict the characters' feelings and actions. Louisa used this particular arts-based strategy to assess students' understanding of difference between how the characters' feelings shifted from the beginning of the text to the end of the text. She also used this lesson to introduce the difference between character traits and character feelings.

After going over the directions and reviewing the two texts being compared, Louisa separated her 12 students in two smaller groups of six and assigned each group a different text.

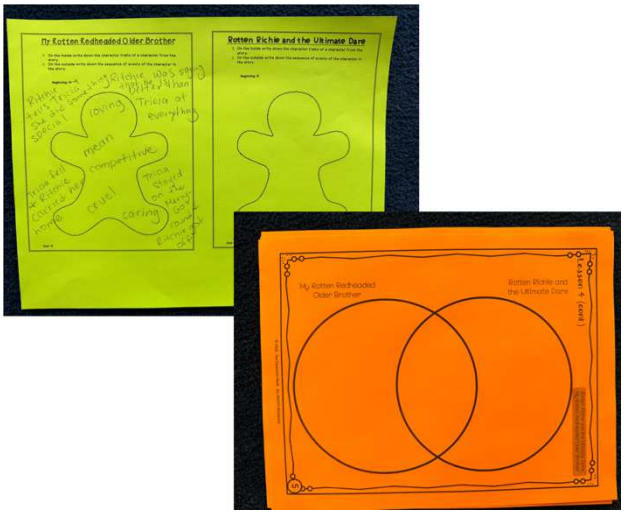
She had each group create a tableau for the beginning and another tableau for the ending scene. The two groups worked together to look back at the text and create a tableau for the beginning and end of the story. Every 15 minutes, Louisa would stop students and encourage them to share out their progress and provide students with feedback. She asked probing questions such as, "What is your character feeling during this part? Tell me why?" Her continual class check-ins created a sense of urgency with students to get right to work after receiving her feedback. As students were working in their groups, Louisa traveled around the room observing. She had a very calm and gentle demeanor with her students.

On the final check-in, Louisa asked to see the beginning scene and ending scene tableau for each group. She led students to compare the first scene to the last scene for each story. Students identified the character feelings, and Louisa emphasized that feelings were dynamic and based on the events occurring in a story. At the very end, she asked students to compare the two groups' tableaus that included different texts in a book series with the same characters. She asked students to notice the character traits that were present in both groups' tableaus, emphasizing with students that character traits are present in both books/tableaus since they were static.

Students used the graphic organizer Role on the Wall prior to the lesson observation to analyze the main character in the two different texts. This graphic organizer resembled a gingerbread character and used in drama to analyze external events that happened in a story that affected internal feelings. Louisa used a Venn diagram to compare and contrast the two texts as a reflective exercise after students shared out their tableaus (see Figure 16). Louisa used both the drama-based strategy of tableau and the graphic organizers as formative assessments for her lesson.

Figure 16

Graphic Organizers Used Before and After Presenting Their Group Tableaus



Note. Students used the green sheet Role on the Wall to explore the characters' feelings for each text, and the orange sheet was used after the observation to compare the different texts.

Marta

School 6

School 6 was a Title I school. The enrollment was 987 students and racially comprised of 52% Hispanic, 33% Black, 10% White, and 6% two or more races (Georgia Department of Education, 2023). The school had a dual language immersion (DLI) program option for K-5, which meant students' instruction was delivered in Spanish and English throughout the school day (Georgia Department of Education, 2023). The school had been receiving professional learning support from the district in the area of STEAM for 9 years. In 2018, the school received STEAM certification from the Georgia Department of Education. The school district did not have a formal STEAM certification process at the time. In 2023, the school received district certification in STEAM.

Marta's Background

Marta had 9 years of experience in education and all at School 6. Her teaching career started out as a paraprofessional for 2 years, and then she transitioned into being a second-grade teacher for 7 years. Marta's background in the arts primarily centered around her music background being in high school orchestra. She could not recall any other formal arts experience, but she did reflect on her classroom learning as a student stating, "I always think back to when I was in school and how everything was so much more hands-on and art focused and drama focused." She explained that not having technology when she was in elementary school invited more creative teaching methods. Marta did not take any arts-related courses in college and has not received any formal arts training as an adult. Her experience with arts integration began when her school introduced STEAM and she started attending professional learning on the topic.

Marta's Class

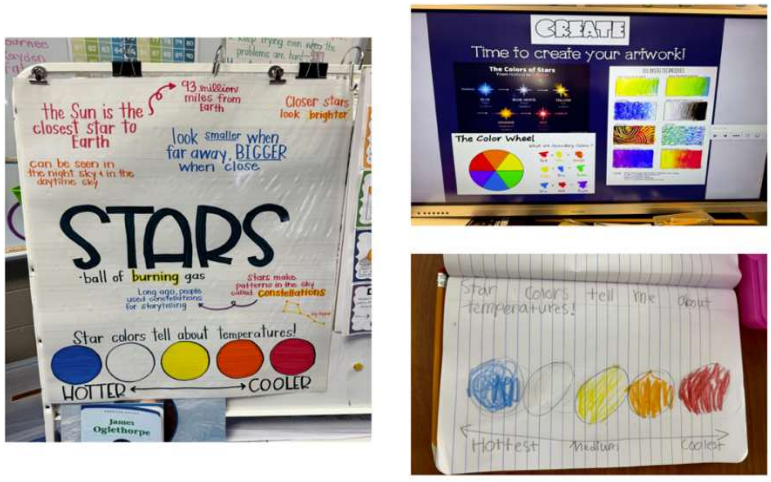
For the past 3 years she had been teaching the second-grade inclusion class, which meant that second-grade students with individualized education programs (IEP) were in her class along with general education students. An inclusion class had two co-teachers: one special education teacher and one general education teacher. Marta's classroom had a friendly and organized learning environment. The classroom was designed with tables instead of desks and a large carpet in front of the interactive board. There was a designated wall showcasing student writing, and there was an anchor chart near the board that demonstrated the various ways stars could be described and classified. There were two word walls reinforcing high frequency words and math vocabulary.

Observation of Formative Assessment

Marta's second grade class explored the attributes of stars, applying concepts from science standards such as brightness, size, and color. Marta designed an arts-integration lesson that involved students integrating the visual arts to create a collaborative mural of stars that depict the night sky. Marta started the lesson with reviewing the science vocabulary and then engaging students in a class discussion about the different attributes of stars (see Figure 17). Students reviewed their notes in their STEAM journals, and she used the turn-and-talk strategy to get students to partner up and describe to their partner what they know about stars. She prompted this by asking, "What do we know about how color relates to the temperature of a star?"

Figure 17

Students Use Prior Knowledge to Teach a Partner About Stars



After reviewing the vocabulary with students, Marta introduced the visual arts technique of shading using chalk pastels. Students were directed to use their STEAM journal notes from a previous lesson and create a star they could tell and write about, reinforcing the concepts around their attributes and implications such as distance from earth and temperature. After the

observation, Marta reported that students placed their stars in a large hallway mural and reflected on the attributes they observed as a class. Marta explained, "students analyzed the different stars and classified their attributes. Students even complimented their peers on their ability to use shading to convey brightness and color" (see Figure 18).

Figure 18

Students Used Shading Techniques to Demonstrate Their Understanding of Stars

Note. Students used chalk pastels and shading techniques to create a star that could be included in the class's collaborative starry night mural.

Paula

School 7

School 7 was a Title I school. The enrollment was 904 students and racially comprised of 64% Black, 21% Hispanic, 7% White, and 8% two or more (Georgia Department of Education, 2023). The school had been receiving professional learning support from the district in the area of arts integration for 9 years. In 2020, the school received the district's arts integration certification and was awarded the Georgia Department of Education's Creative School certification.

Paula's Background

Paula had been teaching for 9 years and a teacher at School 7 for 8 years. She referenced developing in her arts integration practice during the past 8 years as a teacher at her school. Paula

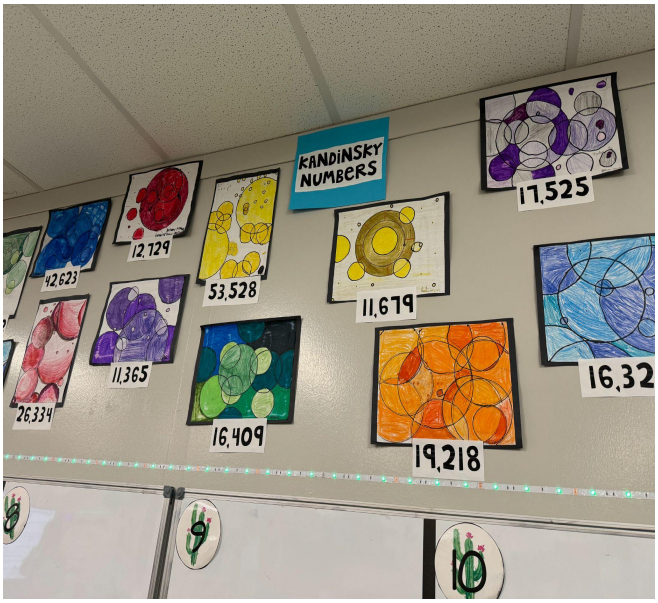
paused when asked about her background because she did not consider herself to have a professional background in the arts. As a student, she was in high school band. In her college education classes, she took an art education and music education class. She reflected on how much she enjoyed these courses when explaining, “I was like, okay these are just filler classes… but I was also like, my goodness could I be an art teacher? My goodness, I have so much fun.” Paula did not consider herself trained or skilled in the arts outside of the arts integration professional learning she received being a teacher at her current school.

Paula’s Class

Paula taught a fourth-grade general education class. Paula’s physical classroom was colorful and organized with tables for small groups of students to collaborate. She had whiteboards all the way around her classroom on every wall. She had evidence of arts integration above and below the whiteboards. Items included an arts vocabulary word wall featuring the elements of visual art and student artwork demonstrating how decimals and place value connect to the artist Kandinsky (see Figure 19). Paula had a designated art table with supplies and media organized and ready for students to select and use.

Figure 19

Student Art in the Style of Wassily Kandinsky



Note. Students created art in the style of Wassily Kandinsky using overlapping circles of different sizes to represent place value in numbers.

Observation of Formative Assessment

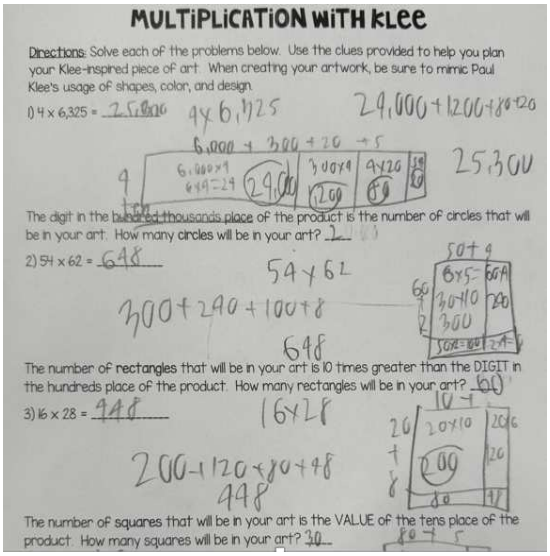
During Paula's observation, she was facilitating a math lesson that explored computing partial products while creating a painting in the style of the artist Paul Klee. The lesson began with modeling the math concept and then transitioning students to responding to the painting *Castle and the Sun* by Paul Klee. The teacher facilitated a discussion about the painting with students using the Artful Thinking Routine "I See…, I Think…, I Wonder…". After modeling the math concept for students and facilitating guided instruction responding to Paul Klee's painting, she released students to work independently.

Students received a differentiated math worksheet that had partial product questions on it. She created three differentiated sheets specifically for her below-level math group, her on-level group, and he above-level group. The answers for each question coincided with an art-making

direction. For example, if the answer was “6,” it directed students to include six circles in their piece of art. The elements of art were integrated into these directions, including geometric shapes, color choices, and types of lines (see Figure 20).

Figure 20

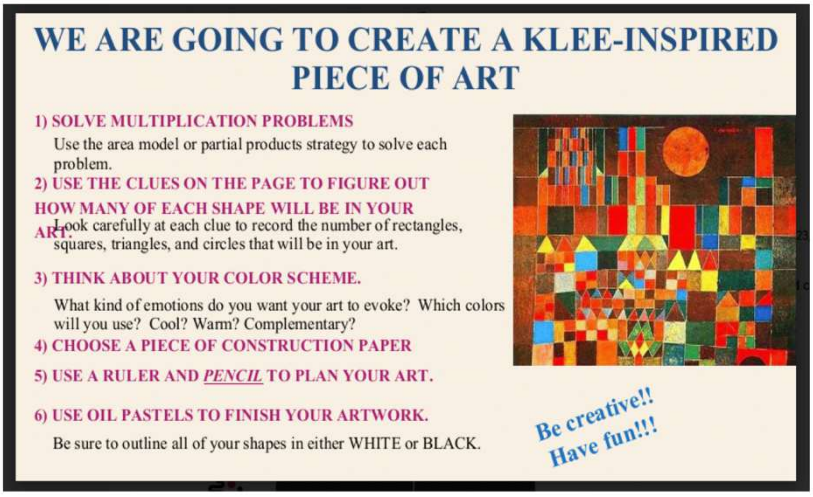
Differentiated Math Sheets



Once students correctly finished their sheets independently, they worked collaboratively on the art-making part of the lesson. At this point in the lesson, Paula was checking in with students and checking their work. At one point she pulled a group of three students over to a whiteboard to practice the math concept. This all was happening with minimal interruptions from students because her directions for the lesson were clearly indicated on the board (see Figure 21).

Figure 21

Step by Step Directions Provided for the Independent Work



Students' Klee-inspired artwork could easily be assessed by the teacher and peers to determine if the mathematical computation was accurate. The art-making constraints were carefully determined by the teacher to ensure that the student-created art was different and honored students' artistic choices (see Figure 22).

Figure 22

Paul Klee-Inspired Artwork Based on Criteria from Their Math Assignment

Note. Students used their answers from their differentiated math worksheet to generate art criteria for creating their oil pastel artwork in the style of artist Paul Klee.

Trisha

School 8

School 8 had 812 students enrolled and was racially comprised of 76% White, 8% Hispanic, 6% two or more races, 5% Asian, and 5% Black (Georgia Department of Education, 2023). The school was STEM certified by the Georgia Department of Education in 2016. Soon after, the school began transitioning from STEM to STEAM and received district support in arts integration professional learning. In 2020, the school received district certification in STEAM.

Trisha's Background

Trisha had been a classroom teacher for 28 years, and for 26 of those years, she taught third grade at School 8. When asked if she had any background in the arts, Trisha was not exposed to the arts outside of the standard elementary art and music class. When reflecting, she explained, "Growing up I was just doing worksheet after worksheet and there were things I didn't

understand. But when given the chance to manipulate things or put things in a real-world perspective, I was able to understand it much better." Trisha also expressed not having any formal training in the arts as an adult. In her undergraduate teaching program, Trisha did not take any arts-related courses. Trisha's first interaction with arts integration was 5 years ago when her school began providing professional learning to teachers.

Trisha's Class

Trisha's third-grade class was comprised of students who qualified for gifted services and required that she was gifted endorsed. The physical classroom was dimly lit with only a few stationary floor lamps and Christmas lights strung framing the screen at the front of the room. The desks were clustered in groups of four, and students had books and notebooks stacked high on their desks. Trisha had a teacher station set up at the front of the room with a comfy chair and a kidney style table in the back corner that had stacks of picture books and paper on it. There were two art carts in the room that were fully stocked and organized with art supplies and media (see Figure 23).

Figure 23

Art Cart

Note. Art cart where students borrow art materials and supplies when working in small groups.

The walls outside the classroom showcased student writing pieces and a math integrated visual art project where students were exploring multiplication arrays to create geometric art in the style of the artist Ferdinand Rosa (see Figure 24).

Figure 24

Geometric Art in the Style of Artist Ferdinand Rosa

Note. Students explored multiplication arrays and represented them visually.

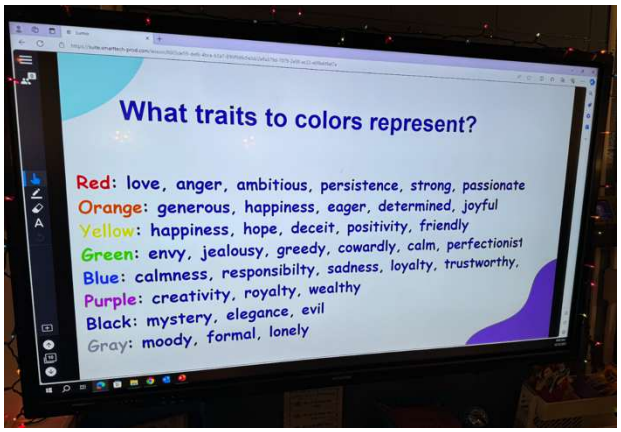
Observation of Formative Assessment

During the classroom observation, Trisha facilitated a third-grade lesson that differentiated character traits from character feelings in a text, and she used *Big Red Lollipop* by Rukhsana Khan as her mentored text to model this. After reading the story aloud, she asked students five questions projected on the screen such as, “How did Rubina change from the beginning of the story to the end?” After, students were directed to do a Table Talk with their table partners discussing the story. After this part of the lesson, Trisha introduced the idea of

character traits and directed students to select a picture book from her back table to read. Students were asked to make a list of character traits for the main character in their book, and beside the list to create a list of similar traits they have personally. Then she discussed the elements of art and how the various elements would be used to decorate their masks. Trisha explained that the design should include symbols that represented the character traits. She used a presentation to walk students through how to use elements such as color to symbolize character traits (see Figure 25).

Figure 25

A Guide on how Colors can Relate to Character Traits



Note. Students identified the character traits of a specific character in a text and created a mask using visual art elements that represented their analysis of the character.

Once Trisha released students to work independently on their reading task, she worked busily preparing the classroom for painting their character masks. She laid out drop cloths, poured paint, and distributed cups of water, paintbrushes, and the ceramic masks. This took approximately 20 minutes, and once she finished, some students were already busy painting their masks. As she followed up with each group, the conversations began with being centered around the supplies and having enough of the desired paint color. Eventually her conversations with students became checking in about what artistic choices they made to represent their character's

traits. One student was painting his mask with one exaggerated blue eye and one red eye. He explained his choices and how they connected to his book *Thank you, Mr. Falkner*: "the blue eye is because he as bullied and sad and the red eye represents his persistency." The teacher did not have the opportunity to check in with every student on their understanding of character traits during the duration of the lesson. At the end of the lesson, she explained her next steps with integrating technology. Students created videos discussing their books and explaining why they chose specific colors, shapes, symbols, and lines to represent their character's traits. QR-codes were generated for these student-created videos and included in the hallway display of the masks (see Figure 26).

Figure 26

Character Analysis through Mask-Making

Note. Students identified the character traits of a specific character in a text and created a mask using visual art elements that represented their analysis of the character.

Defining Formative Assessment

When exploring the phenomenon of arts-based formative assessment, understanding teachers' perspectives on how they define formative assessment in general terms was required (see Table 6). These definitions served as a basis for the study's research process and teachers' instructional pedagogy. When using an interpretative phenomenological approach, gathering

unique perspectives from the data collection was imperative because it ensured that the participants' diverse experiences were captured and understood. This preliminary step assisted with discerning the patterns and nature of the phenomenon of arts-based formative assessment. The process moved from the specific experiences to the universal experience of formative assessment.

Table 6

Participants Defining Formative Assessment

Participant	Definition of formative assessment
Calvin	When assessing I know they are not getting it when they're not able to talk about it as thoroughly or they're giving me very short, limited responses. That's why I kind of know what I'm currently doing is not really working and not pulling out as much as I want from them. So formative assessment, I would say are these quick little things that I would use daily or weekly at the least to check in to make sure they have an understanding of the content as well as the art standard that we're kind of tying in there.
Donna	Formative assessment is assessing learning and what you do with that knowledge. So if they are doing well and they're performing well, then I could say all right. We'll move on to the next topic or we'll add to it or if they're not doing well maybe repeating it or trying something a different strategy. So formative is just to see if the learning that you're hoping is actually taking place. So if they're really maybe meeting their learning targets or whatever that skill or standard or knowledge is that you're looking for.
Fiona	In general, with my fourth-grade team, it's normally a pencil and paper or taking a multiple-choice assessment on the computer with instant results. Sometimes when we're doing writing or other reading comprehension aspects, it might be the simple, multiple-choice answers for the formative or can you write based on this checklist of constraints a piece that's well… written in the different categories. So it really depends on the unit, but more than often we are using that tried and true paper pencil test which is formative, rather than giving them a project to elaborate on.
Louisa	A formative assessment I guess is just the assessments that you're kind of always taking throughout the Unit, we'll call it. So all the different kinds of ways of assessing throughout the unit rather than just the one at the end. It's sort of like follow-up activities. I use a lot of questioning and activities, even games and stuff like that. Exit tickets. What is working? What's not working? What I'm doing a good job at. Sometimes if they're all generally not getting something, I'm like, okay, what do I need to adjust or change? So obviously I'm doing something wrong here. It also helps me with grouping them for the follow-up.
Marta	Formative assessment for me is just a quick check-in to see where my students are throughout the week or throughout a unit and a lot of times when we have done formative assessments. In the past, you got to exit ticket with three things you learn, or two questions you still have. And of course, just a quick stop and jot type of formative assessment also can work.

Participant	Definition of formative assessment
Paula	Formative assessment is a check-in along the way of my teaching. What are the students understanding while I'm still teaching? So, did they get this concept? Are there any misconceptions? So it's kind of along the way of teaching so that I can easily tweak my instruction based on any misconceptions instead of waiting until the end. Okay, let's put everything that we've learned together into a culminating assessment. I kind of think of it as a way for me. It's not for the students, it's more for me, for my teaching. Was I effective in teaching this part? If not then okay, I need to tweak how I will reach it the next day.
Trisha	So formative assessment could be several things. It could be an assessment piece where I'm just watching them and observing something and I see them doing. That's a formative to me. It could be something where they're creating a piece. Also creating is something that I use for formative. So there's not just one strict thing for what a formative assessment is. It's a lot of times formative can be teacher observations and small groups and things like that. When I think about summative assessment there is formative all along the way. So we're in a unit for instance. There are formative assessments I'm going to give all throughout every little standard to see if they've grasped the standard. To me, the difference between formative and summative, is formative is gonna be something much quicker than a summative.

Formative assessment was consistently referred to as continuous monitoring when referenced in the interview data. The terminology “adjustment” was also used to describe moments in instruction where formative assessment was happening. Teacher feedback and student engagement was discussed in tandem when recalling the parts of the lesson where formative assessment was effectively occurring. The formative assessment strategies were often referred to as being engaging activities that involved actions other than pencil-paper assessments. The versatility was further emphasized when teachers discussed the arts. Another key tenet of formative assessment was discussing how teachers benefit from its implementation. It not only was a teaching tool for teachers to use, but a critical step in preparing students for summative assessments.

All but one participant mentioned that formative assessment was intended for the teacher. This was emphasized by participants discussing how they adjusted their instruction and assessed their teaching when conducting a formative assessment of student learning. They all explained that formative assessment involved assessing along the way instead of waiting until the very end of the lesson or unit of study. Based on the definitions given in the interviews, all eight

participants clearly understood the difference between a formative and a summative assessment. Yet, there were discrepancies in how they defined the purpose of formative assessment and whether it informed the student of their learning, the teacher of their teaching, or both. Two of the eight participants described formative assessments in their classroom as "quick" or providing "instant results." Participants described formative assessment as constant checking and the informing of instruction. Donna referred to formative assessment as "mini conferences." Donna described formative assessment:

> I like to listen in on the conversations when students are working with groups. I just kind of walk around and listen to the conversation that they're having. I may interrupt and say "How are you going to show that?" and just ask questions to see if they have some understanding. They are little mini interviews. I am able to say, "I see that you really understand that or can you tell me more about that? Yeah you can see if they completely understand because they did it and not because they had to write it or read it.

Traditional formative assessment strategies were discussed during interviews and also used during instruction. There were multiple traditional formative assessment methods integrated into the arts integration classroom observations (see Table 7).

Table 7

Traditional Formative Assessment Methods Used During Classroom Observation

Participant	Traditional formative assessment during observation
Calvin	Whiteboards Conferring with students using a rubric Flip for videorecording
Cecille	Flip for videorecording Turn and talk
Donna	Mini interviews with students
Fiona	Student observations

Participant	Traditional formative assessment during observation
	Questioning
Louisa	Graphic organizers Peer feedback
Marta	Think-Pair-Share
Paula	Exit tickets Student observations
Trisha	Table talk Flip for videorecording

During the rounds of interviews, exit tickets were mentioned by every participant, which were quick written responses students participated in at the end of a lesson and intended for teachers to gauge student understanding. Another strategy commonly mentioned was think-pair-share, which involved students responding verbally to a question posed by the teacher with a partner nearby. When Calvin described formative assessment strategies he used, he discussed the use of the whiteboard because it enabled a quick check-in on student understanding, and it also provided all students with an active role during the lesson. When discussing formative assessment, Calvin reflected,

> It was a trial-and-error kind of thing. It took me some time to identify the power of the whiteboard method. When I first started integrating the arts, I felt like during student performances I would lose the audience shortly in. I needed a way to keep them actively engaged. As a result, I tried different ways for the audience members to interact with the performer. First thing I tried was a worksheet response where they responded to questions. But this didn't work because some students were writing too little and some writing too much and missing out on the performance all together. Then I came up with

the whiteboard because it was quick and required they all stay engaged and share their responses chorally. I now use the whiteboards once or twice every week.

Although no other teachers referenced the whiteboard method, many of the teachers mentioned using technology in a similar way to provide real-time feedback using programs such as Padlet and Kahoot!. These were online platforms that were interactive and allowed the teacher to see students' responses in a live manner.

Arts-Based Formative Assessments

This study aimed to understand the inner workings of formative assessment in the context of elementary classroom learning, but most importantly, understand the ways teachers use the arts. The arts-based assessment examples specified how the various art modalities could be used to assess. Teachers' experiences of arts-based assessments were related to overall teaching pedagogy in both instruction and assessment. In addition to the classroom observations and follow-up discussion about the formative assessment occurring in the eight lessons, other arts-based formative assessments were discussed during the interviews conducted with each participant. A comprehensive list of all arts-based formative assessment methods that the eight teachers either facilitated or discussed in interviews has been included (see Table 8). The most commonly used arts-based assessments observed and referenced in the data were in the area of visual arts and drama.

Table 8

Arts-based Formative Assessment Examples

Assessment strategy	Lesson example	Participant(s)
Creating a soundscape	Used percussion instruments and found objects to compose a soundscape for a type of precipitation	Donna
Creating and performing a dramatic monologue	Writing in-role as a cell organelle character and explaining why your function is important to the cell	Calvin

Assessment strategy	Lesson example	Participant(s)
Character analysis through mask-making	Create a mask that uses the elements of art to symbolize character traits from characters in a story	Trisha
Artful Thinking Routine: "I See/ I Think/ I Wonder"	Students respond to the Paul Klee painting entitled *Castle and the Sun* with the thinking routine prompts in the form of a class discussion	Paula
Using an Arts-Based Choice Board	When creating an ecosystem, students chose from: 1. Create a script and backdrop/ dramatize a scene 2. Create a stop motion video 3. Create a mini museum	Fiona
Students create a collaborative visual art community piece	Students applied their understanding of the attributes of stars (brightness, color, size) to create various stars, classify/ arrange them, and create a mural in the style of Van Gogh's *Starry Night*	Marta
Artful Thinking Routine: "Ten Times Two"	Teacher uses a photograph related to the text *Long Walk to Water.* Students respond to the photograph making a list of ten details. Then the teacher resets the timer and asks students to find ten new details without repeating any of the previous details.	Cecille
Sketchnoting	Students use drawing and symbols to visualize the literal and figurative meaning of idioms	Calvin
3D model creation	Students design a 3D model of a cell using air dry clay and various materials such as buttons, yarn, and beads	Calvin
Word Portrait	Students use drawing to create a portrait of a historical figure and they use words and thoughts to create the lines that become the figure's silhouette.	Cecille
Visual Art Tessellations	Students apply their knowledge about math such as rotation, translation, reflection, and geometric shapes to create a tessellation. Students integrate the elements of art into the tessellation, emphasizing line, shape, color, and value.	Cecille
Hot Seating	Students step into a role as a character from a story or a concept in a core content area. This role playing strategy requires that the student improvises in-role based on his/ her knowledge of the character. The class takes turns asking the hot-seat character questions. Participants referenced historical figures and fairy tale characters as examples.	Marta Calvin Cecille Paula

Assessment strategy	Lesson example	Participant(s)
Tableau	Students engage in this drama strategy by first forming small groups and using their bodies and facial expressions to create a frozen picture from a story or scene in history. Tableaus was also used to explore a concept in science and word problems in math. Every participant referenced using this strategy in their classroom.	Marta Calvin Cecille Paula Trisha Donna Fiona Louisa
Thought-Tracking	Students use this drama strategy in tandem with tableau and this strategy provides an opportunity to bring the frozen tableau to life. The teacher taps students when they are frozen and they then can move and speak as their character. This step was described by four of the participants. This is another layer of analysis that can be created when students are in their tableaus. Paula described this strategy as being one that she uses to gauge which students have a deeper understanding of the concept being assessed. She does not thought-track every student and it is only used as an additional step when she needs to determine which students may benefit from correcting misconceptions or reteaching the concept.	Paula Calvin Louisa Fiona
A Scarf is a Scarf	Students use this drama strategy engaging their imagination and pantomiming objects they can "create" using a scarf. Students form a circle and pass a scarf around the circle one by one. Each student announces what they are magically transforming the scarf into. This integration strategy can review key vocabulary and use movement and interaction with the scarf to show understanding of what the vocabulary terms mean.	Paula

Development of Bandura's Themes and Subthemes

The findings in this section present the emergence of themes and subthemes that developed during data analysis. As discussed in Chapter 3, Albert Bandura's four sources of self-efficacy were the broad themes. After analyzing the participant interviews, classroom observations, and lesson materials, data was categorized into Bandura's broad themes. The broad themes were then analyzed, and subthemes emerged (see Table 9).

Table 9

Coding of Subthemes under Bandura's Four Broad Themes

Mastery experiences	Vicarious experiences	Verbal persuasion	Physiological arousal
Differentiating for diverse learners	Teacher collaboration and professional learning	Teacher-peer interactions	Teachers' growth mindset
Using the arts during guided instruction	Student collaboration	Classroom interactions	Social-emotional benefits of art
Role of rubrics and checklists			Immersion in creative process
Backwards design for assessment			
Learning environment			
Student engagement			
Student thinking			

Mastery Experiences

Mastery experiences in the context of teaching refer to experiences where a teacher tried something in the classroom and based on successful outcomes, the teacher experienced a boost of confidence in their teaching abilities. Teacher participants described successful experiences using arts integration to formatively assess student learning, and the more successful teachers felt facilitating the various art modalities in a lesson, the greater their sense of accomplishment became. When teachers discussed their experiences, they referenced an increase in how frequently they used arts integration relating to how successful they felt when they tried arts-based teaching strategies. The most subthemes emerged under mastery experiences because a mastery experience indicated that the participant was immersed authentically in the first-hand experience, and this usually elevated self-efficacy (Bandura, 1997). The subthemes that emerged under mastery experiences included assessing diverse learning styles of students, the role of

rubrics and checklists, backwards design for assessment, learning environment, student engagement, and student thinking.

Differentiating for Diverse Learners

Data revealed that arts-based assessments appealed to different learning styles that existed in an elementary classroom. Six of the participants addressed the arts being a solution for engaging their struggling learners that need an alternative method. All of the participants associated the arts with not only reaching diverse learners, but also with providing a variety of different ways for students to demonstrate their understanding. Teachers discussed how not all students gravitated towards the same art modality when using the arts for assessment. Paula and Marta discussed their mixed-level grouping of students, emphasizing that students who were strong in one particular modality usually helped their peers out on instructional tasks. Participants explained how the arts assess diverse learning styles (see Table 10).

Table 10

Assessing Diverse Learning Styles

Participant	Diverse learning styles
Calvin	Through my experiences and with having different types of students within a classroom, arts integration gives them more opportunity to show what they truly know. So even though they may not be able to write a full paragraph written response, I may say they don't know what they're doing. When I give them an option to use the arts like sketch noting, it unlocks it for them.
Cecille	Some of my students can't draw but this person might be able to act. And everyone can't act but this person might be able to do some sort of media technology. Our strengths are different with every child. So, you definitely have to, as the teacher, be open to helping them explore their creative side.
Donna	I teach a very diverse class of students. They don’t all get the engagement they get in my classroom when they go home. I just love how when I integrate the arts, how sometimes my students who are normally the least engaged will light up and be so into it.
Fiona	Using the arts helps them become a well-rounded student. And I just like the fact that they can articulate more. And I think too, it's motivating them to want to do and apply more of their understanding. The kids need all the ways to express themselves. Not just one way, and one fits all. It's pretty much everything is an option and they have opportunities to explore this in my classroom.

Participant	Diverse learning styles
Louisa	With the population that I have a lot of ESL students. they don't learn the same way necessarily. I think as other schools do and they don't quite have obviously the same experiences to draw on and maybe not as much attention, parent involvement in what they do maybe just because they don't have the time or they don't know how to do it, a lot of them are new to the country I just love the idea of students being able to show what they know in different ways.
Marta	I have students at higher levels and students at lower levels and they're able to combine ideas and guide each other whether it's a performance or visual art activity. The students at the higher level are always full of patience and understanding and they're able to help the students that maybe need a little bit more support especially if I'm not there to help that specific group at that moment.
Paula	I love when I get to see the struggling learners get to teach the smarter kids. This can happen a lot with arts integration. I usually do mixed groups and different learning modalities shine at different times. If a student has that artistic ability, that's just more advanced than another student, it is not always the brightest student that is more advanced artistically. Because then, it's just they love that and I love that for them.
Trisha	I have found that arts integration works with all students. It doesn't matter whether they are classified as gifted or not gifted. I feel like it has worked wonderfully with all students because any student can be good at art. They really have taken to the arts which is what's made me excited over the years to do that.

Using the Arts During Guided Instruction

The arts were used in four of the eight classrooms as a formative assessment method during moments of guided instruction. Calvin used whiteboards, Cecille and Paula used Artful Thinking routines, and Louisa directed her students to create a series of frozen tableau scenes to discuss books they read together. These four classrooms were using art strategies to check for understanding before releasing students into more independent tasks.

The other four classrooms were teacher-led in the beginning of the lesson with minimal formative assessment. The formative assessing prevalent in these classrooms occurred during small group instructional time. The formative assessment method used by the teacher was questioning and observing students as they worked on their arts integration task; however, there was not enough classroom time to make it around to every student. The same four teachers who did not include whole-group formative assessment also did not recognize that their application of the arts was actually a summative assessment. The “formative examples” these four teachers

provided included students creating and painting a character mask, students creating a song about a type of weather, students creating a collaborative star mural, and students creating a mini-museum representing an ecosystem. Although formative assessment was present through teachers' observations and questioning, the formative assessment was not arts-based. The arts occurring in these classroom contexts was a summative arts-integrated project. Although teachers reported understanding the difference between formative and summative assessment conceptually when asked in interviews, the application of this when using the arts was unclear.

Conversely, the other four teacher participants referenced formative assessment strategies from their lessons that provided instructional feedback to every student. In Calvin's class, each student performed a cell organelle monologue, and the remaining students were audience members using individual whiteboards to guess the performers' cell function and flash their board up when prompted. Paula included students turning and talking to a partner about a piece of visual art connected to her math lesson. Cecille included students responding with sticky notes to a photograph building schema around a novel that students were reading together. Louisa included students dramatizing scenes from a story and then thought-tracking what the characters were thinking. Thought-tracking is a dramatic role-playing strategy that involves students inferring and describing what is happening in the story when they are tapped on the shoulder by the teacher while frozen in their story's scene.

Role of Rubrics and Checklists

Mastery experiences required instructional planning, and most of the participants discussed the use of a rubric or checklist when using arts integration. The terms "rubric" and "checklist" were sometimes used interchangeably by participants during interviews, and therefore, important to make the distinction between the two terms. A rubric is a set of criteria

that can be used to evaluate a student's performance (Popham, 2008); however, a checklist is simply a list of the criteria itself. Checklists were often used to provide students with the arts and content criteria needed in their arts-based project or product. Checklists are another example of a traditional formative assessment tool that can provide a direct application when integrating the arts. Checklists are commonly used in classrooms with strong formative assessment practices, and although they are not required to be used with the arts, participants have described them as being valuable tools for arts integration.

Three participants described the rubric as being "a road map." Using the rubric as a formative assessment tool to guide the artistic process was modeled during Calvin's classroom observation; students were providing peer feedback on the four criteria items listed in the project rubric. The rubric demonstrated understanding of both the art form's standard and also the content area standards. The measurable and concise rubric provided students with clear expectations on how to approach creating their cell/microorganism monologue and performing it for feedback. Much like Calvin, other participants also linked the rubric to guiding teachers with providing student feedback.

Participants also stressed how the checklist or rubric assisted the teacher with designing the learning outcomes for the arts-integrated instructional task. When participants discussed preparing to write an arts-integrated lesson, they also used the rubric as a tool when planning and scaffolding their lesson or project. Participants described the role of the rubric or checklist; six of the participants discussed the importance of a checklist in the area of formative assessment, and two participants did not mention the use of checklists or rubrics in their arts-based formative assessment (see Table 11).

Table 11

Describing the Role of the Rubric or Checklist

Participant	Description of the role of the checklist
Calvin	I try to always provide instant feedback. This is because I've learned that if they create something or they do something looking at a checklist or looking at a rubric and then I don't talk about it with them until a week or two weeks later they have often forgotten what they were even trying to do and they're lost and they're like, I can't remember what I was even trying to show you here. Or I can't remember what this picture was supposed to represent from that story or what this model was supposed to show me about cells and so I think it's just so important to provide that instant feedback as well especially during those formative moments so that they're getting that feedback in those quick and easy moments so that when it comes to something as big as a summative, or maybe I want a big project they've heard all those little pieces of advice along the way that they could change to make better so that they can really show what they need to know at the end.
Donna	I love to have a rubric or checklist on site for me while I am teaching. It does take time to make these so sometimes I will use a rubric that is generic or general. The important thing is to just have out the criteria so students know what you are looking for. It keeps them on track.
Louisa	There's usually a rubric for my bigger projects. So for the dance they created there was a rubric for that. I just explained to them what the dance must have. I don't feel like showing them a rubric is super important as long as they know that here are the things that you must include in your dance. So the criteria is presented as a list. I was like you must have at least three or more dance movements. You must have an explanation.
Marta	Students use their rubrics when creating their project. And so we've started to adapt those rubrics to include aspects of the art-making and how it relates to the content standards. We'll go over the constraints and the requirements and kind of show how that is reflected in the rubric as well. So it's presented to them and they know what the expectation and the final outcome should look like or what they are going to be critiqued on.
Paula	So just making it so that it's very cut and dry so that I could give that rubric to anybody on my team and we would all be scoring it the same way. And I think that's really what's most important about trying to mesh the art form with the content. I hate rubrics that are subjective. It's like they did this, but it could be anywhere from a one to three. I like to make sure my rubrics are easy to score and measure. I like to know exactly what it is because then I can circle the piece that's missing and the kids know exactly what they did or did not do.
Trisha	Sometimes my rubrics lead to a formative purpose. Students sometimes get the rubric at the beginning when I'm giving the assignment. They might be reflecting on where they're doing throughout, referring back to the rubric.
Fiona	There was no discussion of the role of checklists in the data.
Cecille	There was no discussion of the role of checklists in the data.

Data indicated that if the criteria was clearly mapped out at the start of an arts-integrated task or project, the outcome was better. The data also revealed that a checklist was not only used summatively but also formatively for the teacher facilitating the learning and the students engaging in the learning. Challenges of rubrics were also discussed by participants when commenting that sometimes limited time played a factor in whether they would get around to creating a rubric for an arts-integrated project or task.

Backwards Design Used in Arts-Based Assessment

Backwards design is a planning approach that begins with the end in mind, and therefore, the assessment is established before the activities or content is determined (Wiggins & McTighe, 1998). The data revealed discussion of backwards design and also emphasized how scaffolding and teacher reflection occurred when using the arts to formatively assess student understanding (see Table 12).

Table 12

Backwards Design when Designing Arts-Based Formative Assessment

Participant	Description of backwards design
Calvin	It takes a lot of trial and error to see what works and what doesn't work because something might work year one and year two but it might not work year three…And so when I plan for arts integration I kind of start with a very vague list of what I want to see from my students. And then I begin creating my own example. I think about my own personal creation of the example. I used that when I think about what will help them along their journey of that creation. I think it's super important to think about that when you're designing in the lesson and outline all of the steps because I feel like it's unfair to students if you are assessing them on something that you haven't talked about or explicitly discussed or even modeled.
Cecille	When I am planning for arts integration I always begin with the standard. I start with the content standard I am trying to teach. And then I look for strategies and resources that would help me reach that standard.
Marta	My brain works best thinking of the backwards design model. So if we're picking a standard to work on.. I ask myself, "what do I want the end goal to be?" And then I kind of work my way backwards through that and I feel like that works best for me in terms of planning. So if we're picking for example a social studies standard and an art standard. I think about what needs to be covered to lead up to that point. This is where I would indicate formative assessment in the lesson plan. When scaffolding to do something like role-playing in my social studies standards...So first, we would have to of course introduce a historical figure.

Participant	Description of backwards design
	For example: gather information, allow students to become confident and comfortable with that person before we introduce the arts. When my students are introduced to the arts, I have to model it correctly. I would show them how to step into the dramatic role of a historical figure. I model this in the beginning so that I'm then able to use that strategy in any part. It is not always that I am using the arts as an end result activity.
Paula	I think it's kind of that backwards designed thinking when I plan instruction for arts integration. I know what I want my kids to know. And I know how I want them to show it. So it's just the backward steps I plan out. What are the questions that I can ask? So that I know that they've got it. And, of course, as I've done it and felt successful, I'll reuse lessons year after year, if they work. I'll tweak the questions based on remembering that questions didn't really work. This requires that I take notes on my lessons immediately after I implement them before I forget.
Donna	I begin my arts integration planning with a backwards design, "what is it that we're looking for? How do we show that? How can the arts demonstrate that learning? How do we know that the student has learned that?" So when you look at that and then you kind of backward design it from there, the lesson is clear. Once this is established, I begin thinking about how I group my students. I figure out what is the best way to group them and what steps do they need to go through to reach this level of understanding.
Fiona	I like to think of the end goal. And then go, "Okay, how could they make it different? What's another way they could have seen to create it through this process or what other mediums could they have used? Does it have to be a tactile medium? Could they have created this piece digitally?" This is the process I go through before I begin designing the individual lessons or projects.
Trisha	I usually start with what I want to get out of the lesson and what standards I want them to learn by the end of the lesson. Then I usually just kind of backtrack. I try to figure out what I should do for formative assessments for that. What do I want to see? Do I want to involve visual art? Do I want to involve an exit ticket?
Louisa	She did not reference backward design in her discussion of planning for formative assessment

Learning Environment

Mastery experiences in arts integration require that the learning environment is designed in a way that enables arts-based instruction to happen routinely. When the classroom observations occurred, the arts integration learning environments were characterized by some defining attributes shared by all participants.

Arrangement of Furniture. Attributes of the physical space included the arrangement of the classroom furniture. All participants included flexible seating and tables or clustered desks to easily form small groups. All classrooms also had a designated open space for movement or class

meetings to occur out of their seats. Some classrooms used a large rug for this area, and others arranged the desks to provide more space in a specific area. This area also was used for student performances and class sharing. As noted earlier in the chapter, Calvin had a wooden stage in the center of his classroom for students to present for their classmates.

Print-Rich Walls and Visuals. Authentic student artwork could be found on walls that demonstrated content connections across curricular subjects. Specifically, in six of the eight classrooms, there was student artwork showcasing math integration hanging on classroom walls. In three of the classrooms, there was student artwork accompanying their writing. All eight classrooms had print-rich walls including instructional tenets of arts integration. The documentation ranged from arts vocabulary anchor charts to word walls and some of the classroom even had the creative process and design process visible. The elements of art and the accompanying vocabulary was prominently displayed in most classrooms.

Accessibility to Arts Media. Art carts and art tables were used in classrooms to provide a functional method for students to access arts media when engaging in arts integration. These items were well-organized including labeled baskets, drawers, and buckets that were stocked with visual arts materials and supplies that could be used in the classroom. The smooth and respectful manner in which students interacted with the arts media and supplies indicated that they engage in arts integrated instruction routinely.

Environment that Invites Reflection. When participants discussed their learning environment for using the arts to formatively assess, they did not always describe the physical space. Trisha referenced a routine self-reflection that students participated in at the end of each arts-integrated lesson that served as a formative check-in:

> So a lot of times I will have the students do a self-reflection after engaging in the arts and at the end we always have a closing at the end of every lesson, So we'll come back to the carpet and they will either share with their partner what they've done, something they've learned, or if it's in writing, they will share what they've done and their partner needs to give them a compliment or say you did great job on this.

Paula described routine arts-integrated warm-ups that served as opportunities for students to reflect in her learning environment daily:

> The learning environment has a lot of warm-ups. A lot of my warm-ups are arts integrated, so it might be a math warm up. I'll bring in some other art form like a visual art piece or music. Students will respond to it and discuss how it connects to the math concept. This is part of my learning environment.

Student Engagement

Although mastery experiences look different for a teacher and for a student, the teacher's self-efficacy during a mastery experience using an arts-base formative assessment was largely dependent on their positive observations of student learning. According to the data, teacher confidence resulting from mastery experiences was almost always associated with student engagement. All participants in the study referenced that the arts were a more engaging assessment method than the routine paper-pencil assessment traditionally administered in classrooms. Marta mentioned, "Kids are so much more invested when it is an arts-based assessment and it sticks with them so much longer than a pencil-paper test." Cecille said, "Using the arts to assess allows me to see a different perspective and it allows students to express ideas differently than the pencil-paper test that has a right and wrong answer for each question." Discussion of student burn-out and test anxiety was mentioned when comparing traditional

pencil-paper to more active arts methods. Paula stated, “Kids are excited to finish and share their learning when it is arts-based. They don’t shut down like some of my students do when the assessment is always pencil-paper.”

Paula, Donna, and Marta emphasized that providing students with alternative arts-based assessments that did not require reading and writing led to higher engagement and feelings of mastery in their students. The data emphasized that the arts-based formative assessment methodology should truly assess the skill or content understanding and not always require an aptitude for reading and writing (see Table 13). This subtheme reinforced the earlier finding that the arts engaged diverse learners. Marta pointed out the intrinsic motivations that students possessed when they used the arts to demonstrate their depth of knowledge.

Table 13

Student Engagement for Struggling Readers and Writers

Participant	Description of student engagement for struggling students
Paula	I've got several students that are struggling readers and writers so when the arts gives them options, it is very non-threatening. It's such a fun activity that they're showing what they know and it's easy for me to cheer them on and ask questions to probe to figure out what they're knowledge is without giving them an answer. And it's still just as beneficial as a paper pencil test.
Donna	I placed the student into the role of the animal and then he sat in the hot seat answering questions that his classmates asked him. He used all the right vocabulary. I know that had the questions been at the end of a reading passage, he would have struggled because he is not a good reader at all. But because he was asked in another way, he was able to get the knowledge and communicate it back. He didn’t have a problem communicating verbally. Could he pass it on a pencil paper quiz? No. But I could definitely tell by watching him that he knew exactly all the words, all the vocabulary, and all the concepts. I would have never known the depth of what he knew using any of the traditional assessment forms.
Marta	I feel like when they are creating a piece of art that they're proud of, they put more effort into it. I have a lot of struggling readers and writers in my classroom. The projects can lend themselves to being differentiated so all students feel confident and independent, like my collage project for historical figures. We have some collages that just have pictures on them and they're still pictures that represent that historical figure. Whereas if that student that is struggling with reading and writing can't read a cut and paste activity or can't put a timeline together because they don't understand the words on the timeline, they struggle. But do they struggle with reading and writing or do they struggle with their understanding of the

Participant	Description of student engagement for struggling students
	historical figure? With art, they're able to create something independently. And they're able to show their depth of knowledge because they're not restricted to reading and writing.

Paula described the engagement of her students when she told them to write immediately after actively engaging in an arts experience versus waiting until the next day to write. She explained that it was best if she could "build on their excitement in the moment." She elaborated;

> I mean you will just hear silence and can just see their pencils quickly scribbling away because they are so excited to explain their opinion or their thinking. When I am formatively assessing this way I am not necessarily looking at their grammar or their punctuation, but just, getting to the essence of what do they know about this? They are so excited to share it and they get so upset when I say, "Okay, it's time for lunch."

Although only one participant explicitly mentioned instructional pacing, pacing in each classroom was noted in the researcher's reflective journaling by writing time stamps for each lesson part. The study's data connected pacing to student engagement when Calvin stressed, "Pacing is critical to managing your classrooms so students are fully engaged. Sometimes you may think there is a gap in understanding when really they just weren't paying attention because the instruction was not engaging or paced appropriately."

Student Thinking

The data emphasized the deep thinking that occurred naturally when students were engaged in a mastery experience using the arts. Teachers could visibly see the student thinking that occurred when using the arts to assess. Louisa described that when her students were creating art, it provided an authentic opportunity for her ESL students to talk about their thinking. Paula linked the arts to higher order thinking in classroom tasks. Fiona and Paula

provided more insight on how the arts provided students with an opportunity to develop inferencing skills.

Participants connected the use of arts integration to not only deeper thinking but also greater retention of the material. All of the participants referenced the arts serving as an assessment method that could replace or reduce the number of pencil-paper assessments administered. Trisha compared information on a study guide to an arts-based performance assessment. The findings around student thinking provide a fuller picture of teachers' perceptions of student learning when using the arts to formatively assess (see Table 14).

Table 14

Using the Arts to Encourage Student Thinking

Participant	Description of how the arts encourage thinking
Louisa	Arts integration allows for just letting the kids to collaborate and think aloud and kind of talk through…what they're doing because oftentimes when they're talking through it they either catch their mistake or confirm and build on a really great idea. With our ESL population having them explain their thinking is really really important because once they're able to explain and talk it out, then they understand it. So I really think that the most important part is letting my students think throughout and talk it out…Let them explain because you might look at something that they've created or what they've done and you may not look like they understand but let them talk it out and explain…because sometimes they will surprise you with their understanding.
Paula	In arts integration I feel like it requires probing higher level thinking in any task. It provides an easy way to be one-on-one with them and not be giving them the answers, but instead questioning their thinking to see if they got down the trail and learned what it is I wanted them to learn.
Cecille	Using the arts forces students to problem solve and ask things like how can we incorporate this person's idea and build? My AC students need higher level thinking standards. Arts integration checks off a lot of those boxes, especially with the creativity part. It hits a lot of those higher depth of knowledge levels with them asking to create things and analyze and develop.
Fiona	Inferencing is a huge skill…By using the arts, students can infer a lot more and feel comfortable and confident, then just going "I really don't know anything about this content area passage." I read it but I still don't understand it, but if we were able to discuss it with an Artful Thinking routine, students can imagine what the text didn't explicitly say, but what was implied. I like to even take it a step further…Maybe reenact that passage in our mind, maybe as a visualization of a play, or as a piece of drama? How would that be reenacted? They have to really connect those critical thinking skills with those artful thinking routines to answer that instead of just going, "it's this one because it's in the first paragraph."

Participant	Description of how the arts encourage thinking
Paula	I walk around and listen to my groups as they work. So just hearing them use those clues making inferences to show their understanding. It always goes deeper than just, I can understand that, the Boston Tea Party was the cause of the American Revolution. So did they get that? Yes. But when they use the arts, they will go about 17 steps deeper than just knowing that the Boston Tea Party was a cause.
Trisha	My students remember things so much better when I teach using the arts or assess them this way versus, "show your learning with this study guide". Anyone can memorize this study guide and then go back and answer those questions on the test, but then a week later you ask them the same information and they have no idea what it is because they haven't learned how to apply it. So they need to have a way to apply that information so they remember it. The arts are that application piece.

Vicarious Experiences

The data indicated examples of vicarious experiences using the arts as a formative assessment method. Vicarious experiences in the context of this study included teachers and students observing and learning from one another's success in arts integration. Observing a colleague implement a new teaching strategy successfully often resulted in a growing confidence in the participant's ability to also try the teaching strategy. Through arts-integrated learning, teachers often observed their peers when working collaboratively during grade-level planning time and during professional learning workshops. Vicarious experiences in the study also emerged when exploring teachers' perceptions of student collaboration. Student collaboration involved students modeling and teaching one another, which led to increased self-efficacy. The subthemes that emerged under vicarious experiences included (a) teacher collaboration and professional learning and (b) student collaboration.

Teacher Collaboration and Professional Learning Experiences

Teacher collaboration and professional learning emerged as a theme achieved through vicarious learning (see Table 15). Six of the participants discussed teacher collaboration and linked exposure to new arts-based ideas to a greater likelihood of trying something new in their classroom. Trisha described experiencing less vicarious learning than other participants because

her school did not dedicate time explicitly to arts integration collaboration. Marta and Donna, who did not discuss teacher collaboration or professional learning in their experiences with arts integration, discussed only student collaboration that occurred in their own classrooms and how this related to their perceptions of formative assessment.

Table 15

Vicarious Learning Through Teacher Collaboration and Professional Learning

Participant	Description of vicarious learning
Calvin	I collaborate often with my fifth-grade team. Being able to hear from experienced teachers who have done things in the past allows me to be like, yeah, you're right that won't work, but this will. So I think I would end up with either lots of unfinished projects or a lot more lessons that didn't go as I intended them to if I did not have my teammates talking to me.
Fiona	I will often apply skills and ideas I learn from district professional learning training in the classroom, with my students. Seeing them light up and have that little light bulb moment above their heads is more impactful than any traditional assessment. I especially love it when they bring it up the next day and say, I made that connection with what we were learning about. The arts invite those connections.
Louisa	I go to trainings all the time, even the ones that I am not required to go to. And it's just like that. I feel like the more I see, the more I learn. The easier it seems to try out stuff that I learn or see. Sometimes it goes right out of my brain and I forget all about it and never do it again and then some stuff really sticks with me. That is the stuff I use all the time. I'm just constantly trying to think of ways to make something more interesting and more fun and more engaging and I think that it started to maybe feel a little more natural to use the arts to see what students do and don't know.
Cecille	I help my colleagues as far as resources are concerned and basically show them some of the things that I saw take place during my arts integration trainings. That's how I start off with it. I see it modeled. I find the standards and I'll begin researching and looking into how I want to use it in my classroom with my students.
Paula	I think that my confidence using the arts to assess just comes from, exposure and experience. And I think a huge thing for me personally, was all of the trainings that I went to when I came to my school. At first it seems very overwhelming, it is overwhelming. But when you go to a training and then they give examples, "Here's what you could do and then you could try that." Conversations around how you could bring this into your classroom tomorrow are powerful. And the conversation that you have with other teachers and then being lucky enough to have another teacher to bounce ideas around with as you plan.
Trisha	We don't have designated time to collaborate and plan as a grade level about arts integration a lot. We do collaborate as a team but that's very directed on what we need to talk about. I know one team member who is going through the arts integration district professional learning this year and she's kind of excited about doing it. So I feel like I have someone and I know another teacher in third who did it when I did the arts integration training. So we'll talk about a few things here and there. We can do this or we can do that, but as a whole team, we haven't gotten to that point yet.

Student Collaboration

Student collaboration emerged as another subtheme in the broad theme of vicarious experiences. Participants described their perceptions of how students formatively assessed their peers' understanding as well as their own understanding through vicarious experiences. Discussion around how students were normally grouped also came up during the interviews and discussion of arts-based formative assessment tasks. Unanimously, the participants stressed the importance of mixed-skill, heterogeneous grouping when engaging in arts integration. Three participants mentioned that the grouping usually depended on the objective, but their preference was to mix students up so they could, together, explore their collective strengths and weaknesses as students and artists. Student collaboration was referenced by four participants when discussing formative assessment (see Table 16). Teachers described students collaborating with their peers in a hands-on manner leading to deeper engagement and mastery of the content through the process of student peers teaching one another. Participants stressed the importance of student collaboration serving as a method of formative assessment that not only served the students in their overall understanding but also was critical to the teacher's evaluation of what the students did and did not understand. Teachers discussed observing students working in small groups collaborating as a key formative assessment that occurred during arts integration because they could catch misunderstandings among students in real-time.

Table 16

Student Collaboration with Formative Assessment

Participant	Student collaboration with formative assessment

Paula	I love how when a group is working together and I can hear the conversations and the students are helping each other with the project or with misconceptions. They get excited when they get to work in groups. And I love that I'll often say, I'm not the only person that knows what's going on here. I'm not the only teacher in this room. You can help teach your friends so they enjoy that as well.
Louisa	When you use arts integration to assess, it is about the process not the product. Listening in to conversations among students is really important. When we do the tableaus, the discussion about it is far more important than the actual tableau. The talking and listening to their peers. As the teacher, this is the place where I gather the fullest picture of their understanding. Keeping an open mind is important, don't focus too much on whether or not the art form is facilitated correctly. I always find that you will discover what they do and don't know through getting students to talk.
Marta	I think collaboration helps with art integration because you obviously have students at a higher level and students at a lower level and they're able to combine ideas and guide each other whether it's a performance or visual art activity. The students at the higher level are always full of patience and understanding and they're able to help the students that maybe need a little bit more support especially if I'm not there to help that specific group at that moment. They are all able to work together and all different levels of learning are able to be demonstrated.
Fiona	With differentiating when using the arts I might have one group working on the script, another group working on the backdrops another group working on the costume design where they're all able to make those mistakes, but feel comfortable in them and come up with a better experience than just, here's your activity. Go, do. And I find that my groups are more flexible when it comes to differentiation depending on whatever art modality I'm working with because the kids all work on their strengths and their weaknesses. And they have come out of their comfort zones and they work with others that are stronger in certain suits where they feel comfortable to get help. And it's not just from me, the teacher. I get to facilitate more and they are all operating on that same level playing field. And I think that really helps them understand that learning is a process. It's not that you just get it and you forget it.

Verbal Persuasion

Verbal persuasion involves growing in self-confidence because a peer encourages teachers to try something new. Data indicated that there was a relationship between verbal persuasion and formative assessment for teachers as they developed in their self-efficacy. Out of Albert Bandura's (1997) four sources of self-efficacy, verbal persuasion was discussed by four out of the eight participants when discussing specifically teacher-peer interactions during instructional planning. Classroom interactions between the teacher and students also was categorized as a source of verbal persuasion. The subthemes that emerged under verbal persuasion included teacher-peer interactions and classroom interactions.

Teacher-Peer Interactions

In three cases, instructional planning of arts integration with teachers was associated with verbal persuasion (see Table 17). Calvin, Cecille, and Louisa described how collaboration and planning of arts-integrative instruction with colleagues led them to feel more confident when trying new instructional strategies. Calvin described instances when the arts-based instruction was unsuccessful, but the teacher interactions led him to feel verbal encouragement from his peers, which led to higher self-efficacy. When Louisa discussed how she grew in her self-efficacy to use the arts as a formative assessment measure, she recounted a close friend and colleague who embraced arts integration with her and has since then moved away and no longer works at the school. Louisa also described the impact her verbal persuasion had on a colleague who was new to her grade-level team.

Table 17

Teacher-Peer Interactions

Participant	Description of teacher-peer interactions when planning arts integration
Louisa	Yeah, it's hard to say exactly when arts integration started feeling a little more natural because I had a friend that worked with me and now doesn't work at the school anymore who really embraced this with me. And so I was constantly looking for different ways to do it. The second year it started to feel really natural. Once you learn your grade standards, it's easier to start thinking ahead to things that just naturally fit where I can work it in. I think for a lot of my teammates they think of big project stuff and they don't realize how easily it can be tied in quickly. My younger teammate (this is her third year teaching), we talk a lot and I think that she's really good at thinking of things and coming up with arts integration ideas. I think that she's really trying and embracing it. So she does try to do the smaller things and a lot of times like I will just mention something I'm doing to put it out there. And she will try it. I don't ever want to force it on my teammates, they can try it or not, we all share plans. Oftentimes someone on the team will share a really good idea and I have a really good idea to add on to it …like I said, my younger teammate she'll really go for it based on these conversations.
Calvin	I am very lucky to have a really good team. We are very good at bouncing ideas off of each other and encouraging one another. There are a lot of ideas that go straight in the trash can but eventually we'll find exactly what we want it to be and so I'm really lucky to have that. I think if I did not have a collaborative team, I would end up with lessons that didn't work very well more often. So a lot of the times, my brain thinks big and bold and I go straight to the giant picture in the end. It is good to have other team members cheer me on or challenge me to consider other simpler ways to do the lesson.

Participant	Description of teacher-peer interactions when planning arts integration
Cecille	I definitely tap into my colleagues and they go to me too for ideas. A lot of times I will ask our arts integration liaison for some feedback and inspiration. I'll ask her for certain ideas when we are in collaboration because as a team we collaborate quite often. We are together and we're giving ideas and discussing pretty regularly. This is how we design several arts integrated lessons every year. We map it out together and that really helps.

Peer interactions did not always result in higher self-efficacy, and this finding was notable. Two teachers discussed how their attempts with verbal persuasion were occasionally met with apprehension or reluctance from teachers on their team with low teacher efficacy in arts integration. Donna said, "With arts integration, I am sometimes the only one on my team that goes for it when we are planning. It can be overwhelming to people especially if a lot is going on." Fiona described her team by stating, "We are all at different places with how comfortable we are with truly integrating the arts in an authentic way. Some of my colleagues use the arts, but is more of an enhancement and not quite true integration."

Classroom Interactions

Verbal persuasion was also observed during classroom observations when participants provided positive student feedback and encouragement during the arts integration instruction, specifically the moments of formative assessment. For example, when observing Louisa, she used a dramatic tableau or frozen scene to observe her students' understanding when comparing two texts written by the same author in a series. She praised a group after performing their tableau because they were able to compare the plot of the two texts by using their bodies and facial expressions to reenact the ending scene of the story:

> Group one, things that I loved… I saw all the body levels in your tableau. I saw emotions on your face. You had people and objects in your scene. You did a great job working on showing us parts of the story. Also, I loved your acting!

Her verbal persuasion led to students eagerly telling her about how using drama helped them understand. Their confidence in using drama was clear and their reading ability to compare and contrast two texts in a series was visible.

Another example of verbal persuasion was when Calvin provided students with encouragement after performing their cell organelle monologues for the class. He praised their inclusion of key scientific terms and cell attributes as well as their characterization and loud speaking voice. Calvin praised a student dramatizing the role of the cell's mitochondria:

> I loved the different voice you created for your character. I also loved the tempo. Mitochondria spoke faster to match his very busy job. Such great dialogue! That made complete sense.

When a student was hesitant to perform, the class all cheered them on in a respectful, encouraging manner. Calvin used choral chants that had call and response parts to cue in the cheering at moments when students needed encouragement or an opportunity to refocus themselves. He also provided ample opportunity for students to give compliments to their peers. One peer complimented another, stating, "I liked your voice and acting, it was really believable."

Participants highlighted the autonomy students had to make choices in the learning process when engaged in arts integration, and therefore, verbal persuasion among peers was evident in this discussion of students. Paula discussed how she was always listening in to verbal persuasion among students when they worked collaboratively:

> The formative assessment is the conversations that I hear and the planning that they're doing before they create their final piece of art. So, if they are creating a quilt applying their understanding of multiplicative comparisons and fractions, it's just seeing that

planning piece and how they encourage one another. Students help one another out and I can see that their art gets better because of this.

Marta described how she tuned into verbal persuasion when students provided peer feedback when students shared an arts-based task with the class:

> I try to always give students an opportunity to share their art with their peers. When we share, we're all able to give and receive feedback with one another whether it's the teachers or the students. So that is always very helpful for students to hear from their friends on what they did really well with their art project. A more traditional method would not have encouraged that feedback.

Louisa discussed how she prioritized opportunities for verbal communication with her ESL population, and there were times when this talking led to both formative assessment and student efficacy in arts integration:

> Arts integration allows for just letting the kids think aloud and kind of talk through their thinking. Oftentimes when they're talking through it, they either catch their mistake or grow more confident in their understanding. They are able to come up with some really great ideas and then other kids are able to add on to it or build on what they said which again is like that collaborative piece. With our ESL population, having them explain their thinking to one another is really, really important.

The examples of classroom interaction elevated teacher-to-student interactions; however, there was also verbal persuasion present during student interactions. While observing Cecille facilitate arts-based formative assessments during a classroom lesson, she provided ample opportunities for students to turn and talk with a neighbor and receive feedback on the art piece she projected on the screen. Students were observed encouraging one another through this

process. One student said to their neighbor, “I like the point you made about the setting.” Another student was talking to their partner about the character’s point of view and said, “That’s a good perspective on him.” These positive student interactions informed the teacher on the effectiveness of the formative assessment strategy being used. In Paula’s classroom, during the art-making part of the lesson, a student said to their peer, “I like what you did there.” Marta’s class critiqued their collaborative star painting, and students provided compliments to their peers through this reflection process. These examples demonstrated the benefits of using verbal persuasion to increase student self-efficacy in arts integration and formative assessment of core content skills.

Physiological Arousal

The physiological state of a person was also examined when considering sources of self-efficacy as theorized by Albert Bandura (1997). Physiological arousal relating to arts-based formative assessment was noted in the data collection when participants described positive emotional responses associated with successful learning outcomes and even unsuccessful learning outcomes when participants described failures with arts integration. The subthemes that emerged under physiological arousal included (a) teachers’ growth mindset, (b) immersion in the creative process, and (c) social emotional benefits of the arts.

Teachers’ Growth Mindset

The eight teachers with high self-efficacy in using the arts were comfortable telling about times when integrating the arts did not work as planned and conveyed an enduring growth mindset. Louisa described her progression with her arts-integration practice while she was evolving as a beginner teacher at her school: “When I became a teacher, I just saw all the things I did not know.” She described her journey with arts integration when explaining that the arts

helped her English language learners show their understanding in different ways. Louisa's reflective nature emphasized her growth mindset as a teacher. She stated, "Keeping an open mind is important and the listening I do now as a teacher is the place where I gather the fullest picture of their understanding."

Marta described a time when she tried tableau, which was a drama strategy that was not successful. She adjusted to practicing the strategy with her whole class during morning meetings. The physiological arousal occurred when Marta took a discouraging experience and reached a point of excitement after adjusting instructionally:

> The students just didn't understand what I was trying to do. I introduced tableau. If you're not in movement, you're not speaking. You're kind of just using your body to represent a frozen character. So I thought I had modeled it well, but then they kept wanting to give a performance or they didn't really understand how to story-tell when frozen. So when this happens I practice it and break it down during our morning meeting for a few days in a row. Eventually they get it and I feel more confident using the strategy. I get excited when this happens.

Calvin described an arts integration project that left him feeling overwhelmed and like Marta, also discouraged. Calvin turned to his grade-level team for support when trying the lesson again the following school year. Together they reflected and found a solution that led to a positive physiological state. Calvin's example of physiological arousal also included verbal persuasion as another source of self-efficacy. Verbal persuasion among his peers reinforced a positive physiological outcome that led to greater self-efficacy when using the arts to formatively assess:

> I have had lessons that failed. Once we had this idea and we were having students do things that they didn't necessarily have to do just because we thought that would be neat and so we added in this complicated visual art element with learning about composite volume. We learned from it. In future projects we decided to create concise checklists of what they really do need to know. I limit it to four things.

Calvin also stressed the need for teachers to remain flexible and open to making adjustments when things were failing in the moment when using the arts. He described, "Sometimes when I try an arts integrated project, it doesn't always work as planned…The class discussion just wasn't going as deep as I wanted it to go. And so I ended up adjusting and adapting." This ongoing reflection exemplified Calvin's growth mindset.

Social-Emotional Benefits of Art

When participants described examples of arts-based formative assessments used in their classrooms, they discussed the positive emotional effects the arts had on building confidence, risk-taking, and reducing anxiety. Marta highlighted the risk-taking that occurred when students were not afraid to make a mistake when being formatively assessed using the arts. Fiona explained that students' love for learning came out when they could choose how they wanted to represent their understanding artistically. Paula emphasized the social emotional benefits of arts integration for her particular group of students who have been doing arts integration since kindergarten. Marta also discussed the increased confidence she felt when observing her students' excitement towards this type of learning. The social-emotional benefits of using the arts were described by participants (see Table 18).

Table 18

Social-Emotional Benefits

Participant	Description of the social-emotional benefits of using the arts
Marta	I think students are more willing to work together. They're more willing to make mistakes. They take more risks when I use the arts. We talk about how there's no mistakes in art. Everybody is an artist and they have their own ways of being creative. They're more willing to jump in and help one another if they see somebody struggling or if they see somebody maybe not headed in the right direction with an activity. So I feel like our community of students has just gotten stronger in that aspect being able to support one another and cheer each other on.
Fiona	When I am using the arts to assess, I take a social perspective on it. It is great especially if there are behavior problems. Being able to find a strategy that just makes them beam and makes them happy and feel proud of themselves because they are kids that don't typically get a lot of acknowledgements or don't get these experiences outside of my classroom.
Paula	When students use the arts you can see the courage that it takes to perform for their friends. Most of my students have been exposed to arts integration since kindergarten. Because of this all of my students are comfortable standing up and presenting in front of their friends and working together in groups….It's just so fantastic that they can become so well spoken and so confident and just so aware of their surroundings and how to present for their peers.
Marta	Yeah, first of all, I feel more confident if I feel capable and presenting it to my students in a meaningful way. It gives me confidence and I feel like they're more engaged and they're able to connect if they see that I feel confident. I'm having fun. I'm being more engaging that they're feeling safe to do that as well. And sometimes we just use the art to have fun and be silly and I think it gives them the feeling that it's okay for me to be silly and it's okay for me to make a mistake. because I will be honest. I'm not a performer. So if I'm up there doing my best to present something to them. Teach them in a way that makes me uncomfortable. I feel like it gives them the opportunity to feel safe to do the same.

When teachers reflected on how they felt emotionally and physiologically when learning new arts-based formative strategies, all participants expressed a general enthusiasm. The excitement of learning new arts-integration strategies occasionally evolved into anxiety when participants tried the new strategy in their classroom. Four of the participants used the word "nervous" to describe how they felt about using the arts initially in their classroom practice but then realized that once things were going well, the anxiety was quickly replaced by excitement. Trisha, a teacher who has been teaching in the classroom for 28 years, described teaching using arts integration as "energizing."

Data indicated that boredom and lack of engagement exhibited by students usually led teachers to use an arts-based assessment method. Calvin described, "when students are more engaged, they understand the assessment better," indicating that when student engagement was high during instruction, it was also high during the assessment. Louisa described that she commonly used her arts integration strategies as formative assessment measures with her English language learners in a more exploratory way. She determined which arts-based assessment strategy might be the best fit based on the frustration with the language she observed in the moment while teaching: "If a student can't find the words, I will have them act it out are draw it out based on what I see that they need."

Students' Immersion in the Creative Process

Students' immersion in the creative process was classified as a physiological source of teacher efficacy because the multi-faceted sensory experience of students making art resulted in a variety of feelings described by the participants. When examining teacher perceptions of student learning when using the arts to formatively assess, teachers linked the phenomenon to relevant life skills that students learn through the creative process. Participants stressed that when students ideated and developed unique ideas, it not only sharpened their skills in the classroom but also in everyday life. Similar to the research conducted by Harvard University's Project Zero on the Studio Habits of Mind framework, which was used in art education to explore the habits that artists develop using the creative process (Project Zero, 2003), participants described the skills students acquired when engaging in arts integration. These skills developed by Project Zero included developing understanding around the art form, playfully exploring, reflecting, observing, expressing, envisioning next steps, engaging and persisting, and developing one's craft. Similarly, six of eight participants in this study referenced skills that directly align with the

Artist Habits of Mind and included the following life skills: developing an idea, real-word researching, problem-solving, risk-taking, creating, and expressing one's personal understanding (see Table 19).

Table 19

Life Skills

Participant	Life skills referenced
Calvin	The idea of real world relevance is really big right now and they're going into all kinds of things in a couple years where they're gonna graduate and they're gonna be in this real world and it is not going to be as simple as "Here's a passage. Here's three questions on it. Here's a Science standard. Here's the quiz on it." So allowing them the opportunity to express these creative ideas is important. I think the arts can apply to so many different job types in the future. Today if you want to be a teacher, you have got to be really creative and think outside the box because those people who are hiring our students are not going to be looking at whether or not they can answer three questions about a passage. They're going to be looking at can you bring something that's exciting to our company or can you bring something that's exciting to our product that we are creating or developing. So I think it's just really important to encourage student creativity so that they stick out in the future when those opportunities come.
Paula	Arts integration demands that I give students very broad questions to kind of open up the conversation and just hear how they're thinking…because sometimes they'll go down a path, but then, man, I don't agree. They have this content but a lot of times I realize that they've done some research on their own or they've got some background knowledge that I didn't teach them. The arts demands that real-world researching and problem solving.
Fiona	From arts integration, my students have blossomed into more open and understanding kids when it comes to seeing the differences that are happening in the world, whether it be in an art form or with their peers. So, I think that to me is helping round them out as a small human being and hopefully there's a good chance for success in their future for them.
Marta	I think students are more willing to work together. They're more willing to make mistakes. Like I had said earlier, we talk about how there's no mistakes in art. Everybody is their own artist and they have their own ways of being creative. They're more willing to jump in and help one another if they see somebody struggling or if they see somebody maybe not headed in the right direction with an activity. So I feel like our community of students have just gotten stronger in that aspect, being able to support one another and kind of cheer each other on.
Donna	I try to show them the similarity between the engineering design process and the creative process. They both have the word "create" in them. So if you think creativity is not important, then you're mistaken because in every field out there creativity is needed and required.

Paula stressed that the arts require researching the world around oneself and problem-solving. Fiona discussed students being more well-rounded, empathetic, and better-prepared for their future because they accepted one another's differences when working through the arts.

Marta described the risk-taking required when engaging in the arts in classroom learning. Donna highlighted the synergy between the engineering/design process and the creative process, highlighting this real-world application. Calvin also described how the arts set the stage for students to develop valuable skills that made them marketable in the development of future careers.

Summary

The data collected aimed to address the research question that examined how the arts were used as a formative assessment measure and how the sources of self-efficacy related to this phenomenon. The findings addressed teachers' perceptions of student learning when using the arts as a formative assessment and provided context for how the arts could be used to assess student understanding. The analysis of the data collected during the research process also resulted in presenting themes related to the designing and implementation of arts-based formative assessment. The data analysis also included an examination of how the data collected on the phenomenon of arts-based formative assessment related to Albert Bandura's sources of self-efficacy, which was the study's theoretical framework. The next chapter, Chapter 5, in this dissertation provides a summarization of the study's findings. Findings are related back to existing literature, and implications of the research are discussed. Suggestions for further research are offered. The chapter will more broadly synthesize the body of research and position its placement in the field of arts integration research.

Chapter V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this final chapter is to interpret the study's findings, relate the findings to the existing literature in the field of arts integration, and provide further insight into how these findings can be applied to classroom practices. Additionally, this chapter provides suggestions for next steps on further investigation of this research problem and its significance. The study's purpose was to better understand the phenomenon of arts-based formative assessment in elementary instruction. The research question explored the experiences of elementary general education teachers with high self-efficacy using arts integration. This research study explored the experiences of teachers with high self-efficacy using arts integration. Albert Bandura's theory on self-efficacy was used as the theoretical framework and the system for data analysis.

Interpretative phenomenology explored the experience of arts-based formative assessment by understanding the lived experiences of eight elementary teachers who use arts integration in their general education classrooms. The participants were a purposive sample selected based on their high levels of self-efficacy in the area of arts integration. The participants worked in eight different public schools all within the same large metro school district. All eight of the schools represented have an arts integration instructional model in place at their school and have received ongoing support and training from the district prior to this research being conducted. For the study, data was triangulated through in-depth interviews, classroom observations, and lesson materials. The transcripts and classroom observation notes were analyzed and coded using Albert Bandura's four sources of self-efficacy as the broad themes. This analysis method was not merely descriptive but also included my interpretations as

researcher in a dynamic manner. As researcher, I remained reflexive and in-the-world of the research, which required bringing both my knowledge and openness to the methodology (Frechette et al., 2023). Subthemes emerged from each of Bandura's broad themes: mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal (Bandura, 1997). These subthemes are further discussed in this next section, providing a comprehensive overview of the findings, their significance, and implications.

Summary of Key Findings

The study's purposive sampling included participants with a wide range of classroom teaching experience and minimal backgrounds in the arts, indicating that teachers with high self-efficacy in arts integration did not necessarily have to view themselves as art experts. In fact, the study's sampling implied that teachers' pedagogical beliefs relate more to their confidence using the arts than to the number of years they have taught. Participants in the study clearly understood the purpose of formative assessment and described using it as a tool to monitor and adjust instruction. Teachers' general understanding of formative assessment established context for understanding the key findings that emerged from this study.

This study addressed the primary research question: What experiences do elementary general education teachers with high self-efficacy in arts integration have using the arts to formatively assess student learning? Arts-based formative assessment practices were established connecting curriculum standards with art forms that provided a natural fit, rather than art forms that participants were most comfortable using artistically. Teachers described implementing arts-based formative assessments in a variety of ways but most often using drama or visual arts-based strategies. The strategies were characterized as providing immediate feedback to students and also led participants to make instructional adjustments as needed. The data indicated that there

were discrepancies on how participants identified formative versus summative assessment in their instruction; some participants intended for formative assessment to occur but in the execution, it was more summative. Regardless of how the arts-based assessment was implemented, a strong foundation in formative assessment practice led to successful instructional outcomes. Data also emphasized the role that the creative process played in formative assessment of students through teachers' probing questions and observations of students working in small groups.

The first subquestion for this study further addressed and supported the primary research question: How do teachers with high self-efficacy in arts integration design and implement formative assessment? The key findings included using the arts to differentiate diverse learners, using the arts during guided instruction, the role of the rubric and checklist, backwards design for assessment, the learning environment, teacher collaboration and professional learning, and teachers' growth mindset. Teachers perceived higher student engagement when using the arts to formatively assess students. Higher student engagement led to more intrinsic motivation on the part of the learner. Arts-based formative assessment was associated with critical thinking. Participants expressed using the arts to make student thinking visible and using the arts to develop inferencing skills in students. The arts provided a natural opportunity for differentiation of diverse learners and especially proved to be a suitable assessment option for language learners, students with reading or writing deficits, and even gifted learners. The findings emphasized how the arts can be used during guided instruction to visibly see student understanding and provide immediate feedback. The role of the rubric was defined and signified that clear and measurable criteria led to formative tools used by both students and teachers throughout the arts-integrated learning process. When participants discussed their design process

for creating arts-based assessments, they described using a backwards design instructional approach to determine student success criteria for their lessons and projects. Designing the learning environment also played into facilitating arts-based formative assessment. The physical space required resources and opportunities for collaboration and connection. The social space encouraged risk-taking and creativity among students. Teacher collaboration was also critical when designing and implementing arts-based formative assessment effectively. Teacher collaboration occurred routinely with colleagues in their grade level at their school and was also an integral part of teachers' professional learning experiences. Teachers with high self-efficacy using the arts to formatively assess possessed a growth mindset that turned negative experiences with arts integration into opportunities for self-reflection and adaptations in instruction to occur.

The second subquestion also addressed the primary research question: What are teacher perceptions of student learning when using the arts to formatively assess in the elementary general education classroom? The key findings explored student engagement, student thinking, student collaboration, classroom interactions, social emotional benefits, and immersion in the creative process. Teachers' perceptions of student learning when students engaged in peer-to-peer collaboration resulted in providing teachers with insights on students' understandings through arts-based formative assessment. Positive classroom interactions such as the teachers' coaching of students during arts integration led the students to feel more confident about the content being assessed and the teachers to feel more confident about the effectiveness of the assessment. Teachers' observation of positive students' physiological states led to higher teacher efficacy. Another key finding of the study included students acquiring life skills when immersed in the creative process instructionally. Teachers perceived not only increased confidence and risk-taking in students but also the development of 21st century skills, such as communication,

creative thinking, and collaboration. All of these findings capture a deeper understanding of the phenomenon of arts-based formative assessment, highlighting the perspectives of the teachers with high self-efficacy integrating the arts into their elementary classroom instruction.

Interpretation of Bandura's Themes and Subthemes

The study explored the primary research question: What experiences do elementary general education teachers with high self-efficacy in arts integration have using the arts to formatively assess student learning? As this study was framed and analyzed using Albert Bandura's theory of self-efficacy, the four sources served as the broad themes for the study. The data were coded and categorized according to the source of self-efficacy: mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal (Bandura, 1997). Analyzing these broad themes led to the emergence of subthemes that would be interpreted in this chapter, directly associated with answering the study's subquestions. The first subquestion addresses how teachers designed and implemented their arts-based assessments: How do teachers with high self-efficacy in arts integration design and implement formative assessment? The subthemes that emerged and addressed this question included differentiating for diverse learners, using the arts during guided instruction, the role of rubrics and checklists, backwards design for assessment, learning environment, teacher collaboration and professional learning, teacher peer interactions, and teachers' growth mindset.

Assessment embodies students growing in confidence in their understanding of a particular concept or skill and therefore, examining self-efficacy in students' learning is relevant and meaningful to addressing the primary research question. The second subquestion addressed teachers' perceptions of student learning: What are teacher perceptions of student learning when using the arts to formatively assess in the elementary general education classroom? The

subthemes that explored teachers' perceptions of student learning during arts-based assessment included student engagement, student thinking, student collaboration, classroom interactions, social emotional benefits, and immersion in the creative process.

Discussion of Teachers' Experiences with Arts-Based Formative Assessments

Teachers' backgrounds in the arts and their years of experience teaching provides context for their practice in arts-based formative assessment. The purposeful sampling of participants included a wide range of teaching experience, which suggests that high rates of efficacy in arts integration is more rooted in teacher's pedagogical beliefs than in their years of experience. It was unexpected that Calvin, the teacher with only 2 years teaching experience, possessed such a high rate of self-efficacy using arts integration. Although Calvin might be considered an outlier, I witnessed his passion and his solid understanding of pedagogy surpassing any recommended years in the classroom requirement for effective application of arts integration.

Although participants could all recall moments in their education where they participated in an art form, such as the school orchestra or a college art-appreciation class, not one of the participants considered themselves a trained artist who was an expert in any particular art form. These teachers being "non-artists" highlights that arts integration does not require the teacher to have expertise in the art form to use the arts effectively. Although literature highlighted that teachers who felt uncomfortable with their understanding of the arts were less inclined to adopt an arts integration practice (Buck & Snook, 2020; Garrett, 2010), the study's data indicated there were other experiences that led teachers to grow in their understanding of the arts without being considered experts or identifying as being artists themselves. The findings of this phenomenological study revealed that participants' willingness to try arts integration may be less

tied to arts-rich backgrounds and more tied to factors such as formative assessment beliefs and pedagogical preferences.

Participants' clear articulation of their formative assessment practices indicated a core teaching belief around assessment and provides context for the research question. All participants communicated that formative assessment was used to monitor and adjust instruction (Brookhart & Nitko, 2018; Popham, 2008). Paula emphasized this when stating, "I can easily tweak my instruction based on any misconceptions instead of waiting until the end" It's not for the students, it's more for me, for my teaching. Was I effective in teaching this part?" Participants also recognized that formative assessment is not only for students, but also for the teachers, which demonstrated teachers' growth mindset. Louisa reinforced this asked herself, "What is working? What is not working?... What do I need to adjust or change?" I observed a growth mindset present in these teachers in their discussion of assessment in general, and it had a positive effect on their efficacy, even when the arts integration teaching did not go as planned.

Like Clark (2012), all participants criticized the overuse of pencil-paper assessments and participants described how the arts provided alternative methods for students. Donna stressed the depth of arts-based assessment when saying, "I would have never known the depth of what he knew using any of the traditional assessment forms." Paula stated, "When using the arts there are just so many ways to showcase what you have learned and a paper pencil test isn't everybody's strong suit." The arts provided teachers with a multitude of creative methods for students to demonstrate their understanding outside of reading and writing. As the researcher, I witnessed how quickly the teacher could determine how much of the lesson standard(s) the student really understood by way of the arts.

The distinction between how formative and summative assessment happened in participants' classrooms provided insights into the participants' teaching beliefs and preferences around using the arts to assess. The examples of arts-based assessments during classroom observations truly summative did not leverage the arts in a formative method, but still invited the arts to provide a creative break from traditional assessment methods that students might not find as engaging. For example, in Fiona's classroom, students were creating mini museums of various ecosystems using air dry clay and art media, which addressed the fourth-grade science and visual arts standards in a summative assessment. In order to formatively assess the instruction, Fiona circulated the room, checking in with students in a more traditional formative manner. Her assessment of student understanding was not in the artmaking itself, but instead in her follow-up questions to the students as she checked in. The arts-based summative assessments were still effective performance-based methods for assessing student understanding while engaging in the creative process. These particular classrooms required that the teachers use formative assessment strategies that are not exclusive to the arts, such as teacher questioning and student observations during facilitation. Even though this assessment method did not provide immediacy and always assess every student, it did lead to students immersing deeply in the creative process and teachers using probing questions to understand artistic choices students made.

Other classrooms leveraged the arts as both a formative and summative assessment. For example, Calvin had students performing and critiquing cell organelle monologues using the rubric to guide the process. He used the traditional formative assessment method of whiteboards to assist. Whether using the arts for formative or summative assessment, it still requires the integration of traditional formative methods to maximize their impact on student assessment. Without a strong formative assessment practice, neither of these approaches would be successful.

These findings elevate the role that the arts can play when a teacher has a strong formative assessment practice in place.

The reasoning for teachers selecting a particular art form over another when assessing did not relate to how comfortable the teacher was with the art form itself, but rather how applicable the art form appeared to be with their grade level's standards and curriculum. For example, Paula played a band instrument beginning in high school, and she had a foundational understanding of reading and playing music. However, Paula expressed gravitating more towards visual arts as a fourth-grade math teacher because she explained the visual nature of math, including patterns, lines, and shapes. Her belief that math concepts were more easily seen through the visual arts led her to gravitate more to the visual arts in her math instruction. True arts integration requires evolving arts and core content standards to be happening in tandem (Silverstein & Layne, 2020). Some art forms provide a more elegant fit for curricular concepts than others, and the participants with high self-efficacy in arts integration demonstrated understanding this tenet of arts integration. In my experience training teachers, recognizing natural opportunities for alignment of the art form with content area is not something that comes naturally for all teachers.

When fully exploring the multi-dimensional research question addressing teachers' experiences using the arts for formative assessment, subquestions were used to deepen the exploration of these dimensions. The first subquestion explored how teachers designed and implemented arts-based formative assessment. The second subquestion explored teachers' perceptions of student learning when using the arts to formatively assess. In addressing this over-arching research question and its subquestions, the researcher's reduction and reflexivity is included in the analysis. This next section addresses the subquestions and provides interpretations of Bandura's subthemes that relate to the question.

SQ 1: Design and Implementation of Arts-Based Formative Assessment

Differentiating for Diverse Learners

Whether teaching an English language learner or a Gifted learner, the arts provide a different assessment method that can meet the diverse needs of any classroom. I interpret this diverse learning application as a natural method for differentiation to occur, as reinforced by Marta: "The projects can lend themselves to being differentiated so all students feel confident and independent." Teachers shared stories about struggling students who finally spoke or finally lit up when using the arts. Louisa highlighted, "My ESL students are able to show what they know in different ways." With equal enthusiasm, teachers shared stories of using the arts to stretch their gifted learners to think in new ways. When teachers described this appeal, the mastery experience of reaching diverse learning styles was tangible and left teachers feeling capable. Marta highlighted the diverse learning applications when she stated, "The projects can lend themselves to being differentiated so all students feel confident and independent."

Participants explained that when using arts integration, it was the teacher's job to design an assessment that met the learner's needs. Cecille reinforced that "As the teacher, I have to be open to helping them explore their creative sides." I observed in some of the teachers' practices an awareness of equity among art forms in their instruction. The teachers that did not have evidence of multiple art forms in their practice acknowledged this as an area of growth.

Participants discussed the flexibility the arts bring to the process of assessment by emphasizing that not all students learned the same way. Fiona reflected that "One size does not fit all in instruction," reiterating the point that arts integration implements teaching strategies in a variety of forms and is not prescriptive (Hipp & Sulentic Dowell, 2019). Teachers also credited the use of a variety of different art modalities leading to all students being more well-rounded. In

Gullatt's (2008) review of the arts integration literature, an association was made between arts integration fostering diversity in learning needs and celebrating cultural backgrounds. This study provided evidence of a more in-depth examination of the diverse learning styles when teachers engaged specifically with using the arts for assessment.

Using the Arts during Guided Instruction

The teachers who had arts-based formative assessment embedded into the whole group instruction could clearly determine next steps based on student understanding before releasing students to work independently. The visible thinking that occurred when demonstrating understanding through the arts provided teachers with a pulse on the class's understanding. This was exemplified by Louisa during her guided instruction when she directed students to "make a frozen statue of how the character feels at this point in the story." These teachers were leveraging the arts as a guided instructional approach, providing students with immediate "assessment-elicited evidence" (Popham, 2008, p.7).

I see the evidence teachers gathered during this guided instruction having the potential to inform how teachers group their students, identify what concepts need reviewing, and determining additional differentiation that might be needed. The intention of formative assessment is to advance the learning (Brookhart & Nitko, 2018) and adapt the next instruction steps based on the students' understanding (Clark, 2012). The teachers facilitating the arts during guided instruction used this scaffolded step for a quick snapshot of student understanding and also provided students with an opportunity to try out the art form with guided support from the teacher. I view this guided arts integration occurring as a group fostering community in the classrooms observed.

Role of Rubrics and Checklists

When exploring how teachers design arts-based assessment, the role of rubrics and checklists was addressed. Rubrics or checklists were referenced by participants when creating arts-based formative assessments that could guide instruction for both the student and the teacher. Kennedy Center's CETA framework for the formative assessment process lists included (a) establishing criteria; (b) observing behaviors, conversations, and products; (c) clarifying student understanding through questioning and feedback; and (d) directing students with next steps (Silverstein, 2020). This study provided tangible examples of arts-based formative assessments that could be used within this framework. As for Bandura's source of self-efficacy, teachers were engaged in a mastery experience when using the rubrics and checklists as a roadmap for their instruction. Marta referenced this when explaining, "Students use their rubrics when creating their project… and they know what the expectation and the final outcome should look like or what they are going to be critiqued on."

The data also revealed that the most effective rubrics grounded the lesson or unit, providing a measurable objective evaluation tool for assessing student learning. Paula described an effective rubric as being "very cut and dry so that I could give the rubric to anyone on my team and we would all be scoring it the same way." The participants for this study were in different places with their comfortability with designing arts integrative instruction, but they were all unified on the importance of the criteria being objective. During formative assessment, establishing criteria for success assists both the teacher and students with determining the student learning outcomes during instruction (Brookhart & Nitko, 2018). When determining criteria that is arts integrated, I emphasize that the criteria should represent a co-equal approach addressing both the arts and core content standards. Understanding how a checklist or rubric is used when

integrating the arts is significant because the existing research stresses the need for assessment to include both content area standards and arts standards (Burnaford, 2009; Duma & Silverstein, 2014).

Challenges were experienced by some participants who said that their lack of planning time sometimes played a factor in whether they included a rubric in their instruction. Regardless of time playing a factor, all participants discussed the need for arts-based formative assessment to include clear and measurable criteria for students to reference as they engaged in an art form. Three participants discussed putting the criteria on the board in the form of a checklist or students jotting it down in their journals to reference while they were working on a task. I observed this formative practice of students referencing their checklists leading to self-assessing as they worked through the creative process.

Backwards Design for Assessment

Backwards design is an instructional design principle (Wiggins & McTighe, 1998) and also a subtheme that developed when exploring how teachers design arts-based formative assessment. When designing instruction, all of the teachers referenced a backwards design approach that began with the standard and the task that demonstrated mastery of that standard. The process of starting with the end in mind when designing instruction (Wiggins & McTighe, 1998) is fundamental to the creative processes (Silverstein & Layne, 2020) described in this study. Paula described, “I know what I want my kids to know and I know how I want them to show it. So, it's just the backward steps I plan out. What are the questions that I can ask?” Donna elaborated on the backwards design process asking, “How can the arts demonstrate that learning? How do we know that the student has learned that?” Teachers expressed that the formative

assessment adjustments and scaffolding that were usually planned came after thinking about the end goal.

Teachers stressed that sometimes the arts were used to leverage assessing students along the way, rather than solely assessing the end-product. Calvin emphasized that teachers who were new to arts integration should go through the process of all of the steps in an arts-integrated checklist as the artist before using it with students: "I start with a very vague list of what I want to see from my students. And then I begin creating my own example." This trial run usually leads teachers to revise and fine tune the criteria laid out for a project. Clarity in the directions and criteria leads to a more objective assessment tool. The application of backwards design reinforces an evidence-based practice in formative assessment (Bennett, 2015) that has less to do with the arts than it does with the participants' pedagogies as effective teachers.

Designing the Learning Environment

The learning environment was another subtheme that emerged in the discussion of mastery experiences for teachers when designing and implementing arts-based formative assessment. The learning environment refers to not only the physical space in a classroom but also the routines and rituals present. Examples of rituals evident in this study included self-reflection routines, daily warm-ups, and peer feedback protocols. As I watched these rituals unfold in classrooms, it was evident by students' self-awareness and confident, calm movement through the space that these activities were routine and specific to this learning environment. Existing literature highlights the arts-integrated learning community as being a place for mutual respect among students, self-control, and teamwork to exist (Oreck, 2006).

The arts-integrative learning environment must allow for students to feel connected to one another in the learning process (Hodson, 2018), and the physical environments in this study

provided opportunities for this connection to happen. Opportunities for connection included the use of shared vocabulary among students that was evident by the art terminology prominently displayed on walls and referenced in classrooms. The learning environments of the eight classrooms in this study emphasized routine peer-to-peer interactions and aligned with the existing view of an arts-integrative learning environment being student-centered (Davies, 2013). Characteristics of a student-centered environment were evident, including an open space for movement, clustered desks or tables for group work, flexible seating, print-rich walls that documented arts-based teaching strategies, arts vocabulary, and authentic student artwork. Resources such as baskets of musical instruments and visual art supplies were as commonplace in the classrooms as notebook paper and pencils. When considering how the learning environment relates to teacher efficacy, imperative is that the learning environment minimizes obstacles such as materials and resources, so that mastery experiences can occur.

Teacher Collaboration and Professional Learning

The data illustrated that teacher collaboration affected how teachers designed arts-based formative assessment. Participants described seeing colleagues model arts integration ideas during their collaborative planning time, and this modeling usually resulted in an increased confidence to try something new. Calvin described collaborating with his fifth-grade team "being able to hear from experienced teachers who have done things in the past" was key to developing arts-based assessments as a new teacher. Important to note that because there were no participants in this study's sampling who described a negative experience with teacher collaboration, there was a limitation to understanding the relationship that teacher collaboration had on teacher self-efficacy in using the arts to assess. As researcher, I have witnessed the modeling of new ideas happening in all eight of the schools included in this study and

specifically spreading in the grade levels. Teachers see a colleague on their hall experiencing a successful arts-integrated lesson, and they are inspired to try the idea out in their own classroom.

Most of the participants also referenced their experiences with professional learning workshops. Teachers described having the opportunities to observe the arts-based assessment ideas modeled by the trainers. Louisa described her enthusiasm for this modeling stating, "I go to trainings all the time, even the ones I am not required to go to… I feel like the more I see, the more I learn." Similarly, Paula expressed, "I think that my confidence using the arts to assess just comes from exposure and experience. And a huge part for me personally, was all of the trainings." As researcher, I emphasize that the effectiveness of this vicarious learning experience likely connects to the teacher collaboration happening in tandem at the trainings and routinely as a grade level throughout the school calendar. The teacher feedback loop based on these vicarious learning experiences is critical, reemphasizing that teacher self-efficacy is dependent on more follow-up support than a single vicarious experience such as a strong teacher training (Burnaford, 2009; Corbisiero-Drakos et al., 2021; Duma & Silverstein, 2014; Garrett, 2010; Southern et al., 2020; Wilcox et al., 2010).

Teacher-Peer Interactions

When exploring how teachers design arts-based formative assessment, the data highlighted that teachers not only acquire higher self-efficacy from vicarious experiences but also from verbal persuasion. When examining specifically instructional planning with other teachers who engaged in vicarious learning, there was also a significant amount of verbal peer interactions emphasized in the data. These two sources, vicarious learning and verbal persuasion, go hand-in-hand when examining instructional planning with other teachers. Grade-level planning meetings, friendships among peers, and professional learning workshops emerged as

points of contact where verbal persuasion appeared in the data. When teachers designed and implemented arts-based formative assessments, it required a thought partner to exchange ideas and receive validation or encouragement that a proposed idea could work. Louisa emphasized, "I think my teammate is really good at thinking of things and coming up with arts integration ideas...she will really go for it based on our conversations." Cecille said, "I definitely tap into my colleagues and they go to me too for ideas." The study's data highlighted how verbal persuasion among teachers led not only to generating effective arts-based ideas but also to overcoming challenges that teachers might be facing with a particular class or student. Participants also discussed how verbal persuasion during teacher collaboration generally led to overcoming challenges that without the collective brain power would be difficult to solve.

The data revealed that teacher planning was intentional and implemented by their school administration team school wide. The existing literature in the field of arts integration linked the lack of intentional collaboration to having a negative impact on teacher self-efficacy using arts integration (Hipp & Sulentic Dowell, 2019; Purnell, 2004). This intentional planning time set aside to verbally discuss how the arts can be used to instruct and assess is a vital component that must be included in understanding the phenomenon of arts-based formative assessment.

Teachers' Growth Mindset

During the study's data collection procedures, the majority of the physiological examples described by participants discussed past failures integrating the arts. Teachers' openness to admitting times when their teaching and assessing failed was surprising because participants brought it up unprompted throughout the interviews. Instead of giving up when an instructional strategy did not work, teacher participants used this as an opportunity to adjust their teaching approach. These adjustments demonstrated more instances in which formative assessment and

teachers' self-efficacy intersect. Marta described a failed attempt with tableau, stating, "my students just did [not] understand what I was trying to do…" Calvin described a failed attempt at a visual arts and math project explaining, "We learned from it. In future projects we decided to create clear concise checklists of what they really do need to know." These teacher reflections indicated that this sampling of teachers with high self-efficacy using arts integration have a growth mindset. The data suggest that the phenomenon of arts-based formative assessment requires a growth mindset on behalf of the teacher when designing and implementing assessments.

Conversely, the data also revealed positive physiological responses that revealed teachers feeling "confident," "excited," "proud," and "happy" when they viewed their facilitation of arts-based instruction as being successful. It was surprising that these positive emotions were used, especially after the participants reflected on a time an arts-based assessment failed. For example, when Louisa, Marta, and Calvin described their lessons that failed, they all discussed how excited they were about improving the lesson next time. Teachers' resiliency and willingness to reflect led them to redesign their instruction. Participants described failures as opportunities, rather than pitfalls, and the positive physiological arousal that resulted was palpable.

Participants also expressed experiences when boredom and lack of engagement in students were motivating factors for selecting an arts-based formative assessment over a more traditional assessment method. The selection by the teacher of the arts-based assessment sometimes was described as "impromptu" during instruction and an adjustment based on how the lack of engagement was making the teacher feel physiologically. Teachers' growth mindset was apparent before, during, and after instruction when using the arts to formatively assess. I define

these teachers' mindsets as being those of lifelong learners who are fueled professionally by their own love to learn.

SQ 2: Teachers' Perceptions of Student Learning

Student Learning

Student engagement echoes throughout the study's findings connecting student successes with arts-based formative assessment and the process of learning through the arts. Teachers recalled their observations of higher rates of student engagement leading to a stronger grasp on the skills or standards they were assessing. Paula emphasized student engagement when she continued to use the phrase "it's just so fun" to describe her students' engagement with arts integration.

Data suggested that using the arts to formatively assess led to greater intrinsic motivation, which expanded the research on arts-integrated instruction leading to intrinsic motivation in students (DeMoss & Morris, 2002). Marta linked this gain in intrinsic motivation to students possessing more engagement with the learning itself when using the arts, stating, "I feel like when they are creating a piece of art that they're proud of, they put more effort into it." The intrinsic motivation that naturally occurs when using arts in the learning process contrasts the extrinsic motivation that a summative grade provides. In an elementary setting where most skills and concepts are formative and continue to spiral every year, this intrinsic motivation is significant.

The increased student engagement was not only a relief to the teachers but also the students who struggled with reading and writing. Louisa explained, "with our ESL population, having them explain their thinking is really, really important because once they're able to explain and talk it out, then they understand it." Different assessment methods outside of reading and

writing were especially important in ESL populations and high-poverty schools. Teachers described how the arts provided engaging non-traditional methods of arts-based assessments such as pantomiming and sketching. The discussion of the arts engaging art modalities to assess comprehension, particularly for students who struggle with reading, aligns with existing arts integration ELA research (Dehner, 2020). Although this finding is rooted in teachers' discussion of alternatives to pencil-paper assessments, the student engagement perceived by teachers led them to this realization.

When integrating the arts, the pacing of instruction relates to student engagement. Although pacing was only referenced explicitly by Calvin when discussing student engagement, I noted the pacing of instruction during classroom observations and the eight teachers had varying degrees of skill in the area of pacing. The well-paced classrooms had an energized state of learning that possessed a state of urgency, including formative check-ins happening systematically with the whole group. The formative check-ins served as scaffolds and reminded me of the stages of the creative process. I observed the students actively learning through the arts much like the media on a canvas, and the teacher, the artist. The teachers' pacing had a rhythm of when to start and stop instruction; knowing when to bring the learning into community and when to release learners to explore individually ultimately led to high rates of student engagement.

Student Thinking

Student thinking was another subtheme that emerged when exploring teachers' perceptions of student learning when using the arts to formatively assess. The arts were performative by nature, and therefore, teachers' perceptions of student learning when using an arts-based formative assessment emphasized the student thinking made visible. For example,

when Louisa saw her students create a dramatic frozen tableau based on the story they read, she could visibly determine her students' level of comprehension. The expression of student understanding that can result from the arts supports teachers with perceiving what the students visibly know. This subtheme of student thinking emerged repeatedly in the analysis of mastery experiences and was congruent with the existing literature that links arts integration to critical thinking skills (Duma & Silverstein, 2014; Gullatt, 2008).

One way that student thinking manifested was through teachers' perceptions of the stages in the creative process. Teachers discussed their observations of students working on the various art-making stages with their peers. For example, Louisa described this process with her students when she advised, "let them explain because you might look at something that they've created and it may not look like they understand…let them talk it out and explain… sometimes they will surprise you with their understanding." The communicating of ideas provided teachers with insight into student thinking.

Another way student thinking presented was through teachers' perceptions of students' inferencing skills. The data revealed that when students responded to art and connected observations to meaning, it required higher order thinking skills of the student. Paula emphasized student thinking when providing the example, "it always goes deeper than just, I can understand that the Boston Tea Party was a cause of the American Revolution…when they use the arts, they will go about 17 steps deeper."

The inferencing was most visible when students communicated how the art form connected to their personal knowledge around the particular topic or subject being studied. When teachers routinely use frameworks such as Harvard's Artful Thinking Routines (Tishman & Palmer, 2006) with their class, students became more aware of their thinking. Fiona described

students being able to "imagine what the text didn't say explicitly, but what was implied." The speaking skills that result from routines such as this surface in other ways in the classroom, too. Cecille highlighted that the arts provide students with a multitude of ways to "problem-solve and ask things like how can we incorporate this person's idea and build upon it?" I see the arts providing students with a language framing their thinking in unique ways.

Student Collaboration

Teacher perceptions of student learning when using the arts to formatively assess included discussion of student collaboration. Much like teacher collaboration related to vicarious experiences when designing assessments, student collaboration included vicarious experiences as students developed self-efficacy with a skill or concept. During arts integration, students engaged in teaching one another, and this student-centered peer teaching often led students to adjust as they were constructing their understanding. For example, in Louisa's classroom, a student was having difficulty with which part of the story they were supposed to be dramatizing in their frozen tableau scene. A peer helped the student, which led to immediately adjusting their frozen statue to depict the problem of the story. This peer adjustment provides a specific example for what the existing research lacks. Arts integration fostered student-centered learning and the teacher being the facilitator of the instruction (Davies, 2013; Silverstein & Layne, 2020). This phenomenological study provides examples of how these advantages manifest in arts-based formative assessment.

When discussing student collaboration, participants shared their perceptions on grouping their students. The data revealed that mixed, heterogeneous grouping usually worked best with most arts-integrated tasks. Marta explained, "when you have students at a higher level and students at a lower level and they're able to combine ideas and guide each other…all different

levels of learning are able to be demonstrated." The groupings offered participants interactions between group members and opportunities for peer teaching, which was evident during classroom observations. Arts integration encourages student-centered learning and collaboration, which aligns with the existing research in the field (Duma & Silverstein, 2014). However, this study emphasizes the effect that Bandura's vicarious learning experiences have on peer learning through arts-based formative tasks.

Classroom Interactions

When investigating teachers' perceptions of students' learning, classroom interactions that involved verbal persuasion were present in the classroom observations and the participant interviews. Teachers' verbal praise and encouragement to students during arts-based formative assessment led to teachers feeling more confident because they experienced a positive student learning outcome. Verbal persuasion from the teacher also resulted in a perceived increase in the student self-efficacy with a particular skill during the classroom observations. Calvin encouraged his students dramatizing cell organelles by saying, "I loved the different voices you created. I also loved the tempo you used." Encouragement was particularly important in instances where a student needed additional verbal persuasion to take a risk in the classroom using the arts. The encouragement the teacher provided the students affirmed students of their understanding, providing concrete examples of the intersection between teachers' perceptions of student learning during formative assessment and verbal persuasion.

Verbal persuasion also had an effect on classroom interaction that was student to student, especially during the art-making process. For example, when discussing a quilting project integrating multiplicative comparisons and fractions, Paula discussed, "the conversations that I hear and the planning that they're doing before they create their final piece of art…Students help

one another out and I can see that their art gets better because of this." The existing research in the field stresses how essential teacher collaboration is to the success of arts integration (Hipp & Sulentic Dowell, 2019; Purnell, 2004); however, this study emphasizes the role student collaboration plays in both formative assessment and teachers' efficacy with arts-based instruction. The apparent verbal persuasion I observed during classroom interactions welcomed risk-taking and provided opportunity to learn from mistakes, and most importantly, not be afraid to talk about them together. Both teacher and student efficacy were strengthened through positive verbal classroom interactions when using arts integration, which is congruent with the research on formative feedback emphasizing the role of the teacher and student in the continual feedback loop (Black & Wiliam, 1998; Brookhart & Nitko, 2018; Clark, 2012; Greene, 2020; Schumm, 2006).

Social-Emotional Benefits of Art

Teachers perceived students benefiting socially and emotionally when using the arts successfully to formatively assess learning. Participants discussed the positive emotional effects the arts had on building confidence, risk-taking, and reducing anxiety among students, which aligns with the existing research on arts integration positively impacting social-emotional learning in students (Anderson & Valero, 2020; Becker, 2020; Casciano et al., 2019; Duma & Silverstein, 2014). Some of the teachers recognized the importance in modeling risk-taking for students using the arts; Marta stressed "there's no mistake in art," and teachers' modeling of this included humor. As the researcher, just as I observed teachers' love for learning emerge when participants discussed past failures, their love for learning appeared when discussing the social emotional benefits of teaching this way. Marta described this instructional approach stating, "I feel more confident if I feel capable and presenting it to my students in a meaningful way."

When teachers perceive students exuding confidence and excitement, this has a direct effect on the students. Similarly, Fiona perceived her students' love for learning when explaining that when her students use the arts, they "beam" and they "feel proud of themselves."

Participants also used the arts during instruction when they perceived students experiencing negative emotions such as boredom or frustration, which meant the arts proved to be an effective intervention for engaging students in a different way. This study revealed that the arts not only engage students in different ways, but the arts also engage teachers in different ways. This was especially important for Trisha who has been teaching in the elementary classroom for 28 years and described using the arts as "energizing" at this point in her career.

Students' Immersion in the Creative Process

The creative process was referenced in participants' perceptions of students expressing understanding through the various art forms. Silverstein and Layne (2020) outlined the five stages in the creative process—imagine, experiment, create, reflect, and share—emphasizing that the creative process was not centered around a singular end product, but rather the learning process itself. When discussing experiences with arts-based formative assessment, teachers described supporting students on their journey with the creative process by listening in as groups worked ideating, revising, and creating art. The line of questioning that occurred between teacher and students during the creative process was observed during classroom observations. Fiona asked a small group the question, "How are you going to show that?" and Paula asked, "What do you see in the art that makes you think that?" I observed these types of questions encouraging deep thinking and also providing students with an open space for responding. I also noticed that through teachers' lines of questioning, they were continually trying to get their students to arrive at their own conclusion about how the art could be created and how their understanding would

support the art-making choices that students made. This finding was congruent with the research on formative assessment around closed questions, not advancing thinking, and preventing students from expressing their own ideas (Black et al., 2005).

Teachers described that when students have been immersed in the creative process, skills acquired in students not only served them in the classroom but also more broadly in their outside lives. This development of skills when immersed in the creative process aligns with the existing research conducted by Harvard University's Project Zero on the Studio Habits of Mind for students engaging in artmaking (Project Zero, 2003). The eight habits in the Studio Habits of Mind framework include developing craft, engaging, and persisting, understanding art worlds, stretching, and exploring, envisioning, observing, reflecting, and expressing (Project Zero, 2003). As the researcher, I noted there is synergy between these habits that artists develop when immersed in the creative process and the life skills that result. I aligned these habits with the findings on life skills described by teachers (see Table 19). Although life skills and artist habits do not indicate mastery of grade-level standards and curriculum, these finding addresses teachers' perceptions of student learning and align with the existing arts integration research on 21st century skill development in the areas of creativity, critical thinking, collaboration, and communication (Corbisiero-Drakos et al., 2021; Duma & Silverstein, 2014).

Implications for Arts Integration

Implications for Teachers

This research encourages any teacher, regardless of their experience in the classroom or background in the arts, to thrive using the arts to formatively assess classroom learning. This study affirms that arts integration is not dependent on expertise in the arts, but more importantly, on a willingness to learn new things. Possessing a growth mindset assists teachers with

overcoming instructional hurdles and truly leveraging the power of the arts to assess student learning.

Arts-based formative assessments provide an alternative to traditional pencil-paper assessments and a means for diverse learners to communicate their understanding using a variety of art modalities. This study implies that when teachers present instructional choices to students, arts-based strategies should be considered. The art modalities serve as a natural differentiation method for diverse students (Oreck, 2006; Silverstein & Layne, 2020). In my teaching experience, this indicates that when teachers design opportunities in their classroom for student choice and differentiation, modeling arts-based formative assessment should be central.

The study implies that using the arts to assess requires a strong formative assessment practice to be most successful. The arts can be using in a variety of ways to assess student learning, but using arts-based strategies for formative assessment does not mean you replace traditional methods, but instead grow your assessment practice. Traditional methods used in tandem with the arts can lead to high student engagement and ultimately high efficacy in the teacher facilitating the assessment. A teacher using the arts to formatively assess should consider where and when this occurs in instruction. The study implies that instructional pacing is important. Pacing that utilizes the arts needs to model a feedback loop between the teacher and the students that is timely and continual. Leveraging arts-based strategies during moments of guided instruction will prove most effective. When arts integration is used in the gradual release method (Frey & Fisher, 2011), arts-based strategies that are performative and facilitated chorally can provide teachers with an opportunity to quickly check in with all students in the class and adjust instruction as needed. For example, using whiteboards or having students respond to the teacher's prompts using specific movements. Using choral activities allow for the teacher to

quickly scan the room and the student thinking to become visible. Arts integration requires a student-centered learning environment that invites collaboration to occur among students (Clark, 2012; Hodson, 2018) and verbal feedback to occur routinely. When creating a physical learning environment conducive for the arts, teachers must factor into the design things such as flexible seating, small group work stations, organization system for arts supplies, and a designated open space for students sharing out.

Pairing arts-based assessments with a rubric or checklist was a key tenet that emerged from this study and implied that teachers should create rubrics as part of the instructional design when preparing for arts integration. The rubric created by the teacher should specifically distill the art project or learning experience into measurable and objective criteria. The study related this process to a backwards design approach that began with teachers identifying the desired results of their instruction (Wiggins & McTighe, 1998). The findings emphasized teachers using a backwards design approach, which meant teachers must design the rubric before implementing the instruction.

This study demonstrated the instructional feedback loop required in arts integration (Burnaford, 2009; Corbisiero-Drako et al., 2021; Duma & Silverstein, 2014; Garrett, 2010; Southern et al., 2020; Wilcox et al. 2010). Teachers who were most effective when using the arts to formatively assess close that feedback loop by routinely collaborating with their colleagues. The study implied that this collaboration should include verbal encouragement among peers and the vicarious modeling and sharing of ideas. The powerful role collaboration plays implies that teachers should create opportunities for reflective planning to occur with their peers soon after any professional learning takes place to ensure the transfer into classroom practice. To be most

effective, this collaborative teacher planning approach should also occur during routine grade level planning meetings with their peers.

Implications for School and District Leaders

Teachers' perspectives on using the arts in the general education classroom provides critical insights for leaders in the field of education (Evans, 2018). Participants' willingness to adopt arts integration without having prior expertise in the arts implied that general education classroom staffing decisions in a school with an arts integration program should prioritize teaching applicants' growth mindset, rather than their arts background. The study emphasized that evidence of strong pedagogy informed teachers' effectiveness integrating the arts more than any sort of art form expertise.

Fostering high teacher efficacy in using the arts routinely in instruction and assessment requires opportunities for collaboration be built into the school calendar with a cadence that provides timely feedback. School leaders must factor collaboration time for teachers at the local school level and professional learning opportunities each year for incoming teachers new to arts integration. School leaders should consider implementing a mentorship program for collaboration to occur; the veteran teachers can collaborate and mentor the teachers newer to this pedagogy. The study even suggests that veteran teachers who have high teacher efficacy still need professional learning opportunities to generate new ideas and continue growing in their teaching practice.

This study's insights on how to effectively use a rubric provides school leaders with concrete steps for teachers to follow when designing and implementing arts-based instruction using a backwards design approach. School leaders could also use these rubrics during classroom observations to analyze how the arts are being used to assess students' mastery of grade level

standards. Additionally, school leaders new to this pedagogy could lead their staff in together creating a rubric that includes criteria that should be evident in their school community as they become an arts integration school.

When school leaders develop a community of learning built around the arts, a school culture is required. The positive physiological effects perceived by teachers when students are immersed in the creative process has implications for school communities, especially as they aim to improve school culture by way of arts integration. This study's positive physiological effects of the teachers when using the arts urges school and district leaders to consider how teacher art experiences can promote well-being and temper teacher burn-out.

When fostering learning environments for arts-based formative assessment, school leaders should budget for essential items such as tables instead of single desks, art media, and supplies. Schools should also consider systems such as a dedicated storage space within their building that houses art supplies and materials. A system such as this would invite teachers to easily access materials and borrow items as needed, which in turn removes resource accessibility as a potential obstacle preventing teachers from using the arts instructionally.

Implications for Training Programs

This study implies that a district-wide approach to professional learning can support schools with sustaining an arts integration school model, particularly in the area of training new teachers hired each year. Offering annual 1-year training programs provides schools with the means to train new staff at the district training with other teachers from around the district who teach the same grade level.

The study revealed implications for aligning art forms with content standards. Visual arts and drama strategies were used most frequently as a formative assessment measure in

classrooms. Based on this finding, I see value in arts integration training programs developing a scope and sequence that begins with these two art forms to build teacher efficacy around aligning content to art discipline.

Teachers would benefit from training programs emphasizing the use of arts-based formative assessment strategies during both independent practice and guided whole group instruction. Gradual release is a three-part plan that involves the teacher modeling the skill whole group, then transitioning into guided instruction with the whole group, and then with students practicing the skill independently (Frey & Fisher, 2011). Professional learning should also include the modeling of arts-based formative assessment during guided instruction and provide teachers with insight into how the arts-based strategy can be a powerful method for quickly checking for understanding during whole-group instruction. I propose this vicarious modeling being most effective if the trainer is interacting with a class of students during the professional learning workshop and the teachers are observing.

Additionally, professional learning should have an emphasis on rubric criteria when addressing instructional design with teachers. Workshops modeling the process of creating a rubric with teachers will not only improve the outcome for students but also provide administrators and instructional leadership with a road map when observing arts-based instruction. The development of rubrics would require teacher-peer interactions. The study's emphasis on teacher collaboration implies that professional learning workshops should engage participants in teacher collaboration and follow-up support. Allocating time in the workshop agenda for teachers to collaborate and plan for how they will apply the ideas from the training to upcoming lessons is a critical step. Opportunity for collaboration with the workshop artist or presenter reemphasizes existing literature. Southern et al. (2020) observed lower rates of

confidence in teachers when artists visited their classrooms and modeled the arts without instructional collaboration present.

Higher education is another environment that can learn from this study's implications for teacher training. None of the eight teacher participants in the study studied arts integration in their teacher education coursework, and this finding implies that higher education should consider the benefits of exposing pre-service teachers to this methodology. This study aligns with the existing literature recommending inclusion of arts integration courses in the elementary education degree program requirements (Buck & Snook, 2020). The implications this study has on arts integration training programming could provide insights into designing coursework that supports teachers with including the arts as they develop their teaching pedagogy. As an instructor who works with both pre-service and in-service teachers in higher education, I see great potential in introducing arts integration during the formative period when teachers are developing their pedagogical approaches. Coursework in the area of arts integration could expose adult learners to the various art forms across curriculum through field experiences in classrooms. Courses could instruct students on how to design and implement arts-based formative assessments, with an emphasis on differentiating for diverse learners, using the arts during guided instruction, the role of the rubric, and the learning environment. In addition, visual literacy could be included in the coursework to elevate arts-based formative assessment strategy such as the artful thinking routines (Tishman & Palmer, 2006). Like Engelmann et al. (2018) and Luton (2021), this study aligns with the notion that exposing college teaching students to coursework in arts integration will lead to teachers feeling more equipped to design and implement instruction using the arts, which ultimately will lead to higher teacher efficacy.

Limitations

The phenomenological qualitative research included natural limitations due to the sampling size and the methodology. Maxwell (2013) describes generalizability as the ability to generalize from the findings on the sampling in the study, and this could occur internally (making conclusions within the group being studied) and externally (making conclusions that reach beyond the sampling). As the sample size is relatively small, n = 8, there is limited generalizability. Although the study examined eight teachers at eight different schools with diverse demographics, the participants themselves were not from diverse pedagogical backgrounds. They were all eight teaching in the same metro school district and therefore, had access to many of the same professional learning opportunities and arts integration training. This study's participants did not work with one another professionally; however, they did receive district professional learning experiences similar in format and content as part of their pedagogical background. Although this study makes a strong case for a unified district approach to arts integration professional learning and support, this study is limiting in its generalizability to all teachers with high self-efficacy in arts integration because of the range of access that teachers have to professional learning who engage in arts integration as an instructional pedagogy.

The methodology of this study was interpretative phenomenology and therefore, the research was subjective, including the interpretation of the researcher by design. This qualitative study integrated the researcher's experience and understanding of arts integration into the interpretation of findings. The data collection methodology was primarily through participant interviews. Having a researcher conduct these interviews with a depth of background knowledge in arts integration did enable a rich conversation about the phenomenon of arts-based formative

assessment through probing and follow-up questions. Although the methodological design was appropriate for exploring a phenomenon based on lived experiences of elementary teachers, the subjectivity of the interpretations limit the research from being universally applicable to all elementary teachers engaging in arts-based formative assessment.

Another limitation of the study existed in the art form examples of arts-based formative assessments provided and the classroom observations conducted. Any effort made to explore and investigate arts integration requires rich discussion of all four art forms and how they can be used across curriculum. The data that emerged from this study focused heavily on the visual arts and drama integration strategies that were used as arts-based formative assessments. Uncertain was whether the preference of the teacher in using these two art forms was based on past mastery teaching experiences or if these modalities were the most suitable for students to express their knowledge on the specific core skills being assessed. Additionally, with minimal discussion in the interview data of music and movement, the study is limited in understanding the effects and nuances of music and movement on arts-based formative assessment.

Future Research

This study analyzed four different sources of self-efficacy, and four different arts forms were explored. The multifaceted nature of this phenomenon invites a variety of investigations into future research possibilities. This research focused on the commonalities that existed between participants when engaging in the phenomenon of arts-based formative assessment and less focus was placed on the teachers' backgrounds and beliefs that led them to their high efficacy using the arts routinely in their classroom. Future research could emphasize the pedagogical approaches of the teacher participants and align instructional preferences that lead to higher self-efficacy using arts integration.

When examining all of the sources of self-efficacy framed by Albert Bandura's theory, teachers' experiences with physiological arousal emerged in teachers' perceptions of student learning but not in their discussion of their individual facilitation of learning. A theme presented in the data that provides opportunity for deeper understanding included teacher beliefs around the growth mindset and its physiological effect on teachers when using the arts to assess. The concept of growth mindset emerged when two teachers discussed negative physiological responses that required reflection and adjustments to their instruction using arts integration. Examining how a teacher transforms a negative physiological response with actions that either strengthen or weaken self-efficacy would provide deeper insight into the role of self-efficacy in arts-based assessment. The literature indicates significant social emotional benefits of the arts on students (Anderson & Valero, 2020; Becker, 2020; Casciano et al., 2019; Duma & Silverstein, 2014), but a study that further investigates the impact of physiological states of teachers during arts-based instruction could provide information on the social-emotional effects of teachers when using the arts as a medium for teaching.

Future studies could also be conducted addressing the research question using assessment strategies in one specific art form. Isolating a particular art form could provide deeper insight into the benefits and obstacles experienced by teachers when formatively assessing classroom learning. A future study aiming to understand the implications of formative assessments in specific art forms could include in the population, elementary art specialists in the respective art form being investigated to provide a deeper exploration of assessment in each art form.

Just as there is opportunity for future deeper research into one specific facet of this phenomenon, there is also opportunity to address this research question with a wider population of teachers including teachers in a variety of districts and states. Quantitative measures such as

integrating the use of teacher surveys on teacher efficacy and even tracking summative student scores in arts integration classrooms could be used to quantify the impact of using the arts in the formative assessment process. This interpretative phenomenological study was focused primarily on general education classrooms grades 2-5; however, future studies could examine subgroups of students such as English language learners, gifted learners, or special education students. Future studies could also look specifically at early learners or intermediate grade levels.

The findings of this study are significant but could easily invite further investigation on the topic of arts-based formative assessment. This study related self-efficacy in arts integration to professional learning experiences and teacher collaboration opportunities. Future research could address the specific impact that professional learning had on teachers' implementation of arts-based formative assessments. The field of arts integration could also benefit from more research on how rubrics can most effectively inform the formative steps in a lesson. A more in-depth examination of how teachers write and implement the rubric in an arts-based assessment could lead to a better understanding of the phenomenon.

Conclusion

The phenomenological study resulted in implications for elementary teachers, school and district leaders, arts integration training programs, and even implications for teacher education programs. The study implied that a teachers' high level of confidence in arts integration was not reliant on expertise in the arts or possessing a background in the arts. The acquisition of high efficacy was related to teachers' pedagogical beliefs and teachers' professional learning experiences. This finding indicated that school communities aiming to adopt arts integration as an instructional model did not require a teaching staff with arts backgrounds. Instead, this

teaching pedagogy requires teachers to have strong foundational teaching skills and a willingness to try something new in the classroom.

The study highlights the need for ongoing professional learning experiences for teachers that specifically models and provides the needed resources when using the arts to formatively assess routinely in the classroom. The study also emphasizes the role teacher collaboration plays in designing arts-based formative assessments. Fostering a collaborative culture implies that schools must prioritize intentional school-wide and grade-level planning for teachers and allocating the time for this to occur. Formative assessment strategies should be inclusive of methods beyond the traditional pencil-paper assessment, integrating a variety of learning styles and modalities. An arts-based formative assessment fosters higher engagement and provides a more meaningful learning experience for students.

In the field of arts integration, the study contributes to the area of assessment, which is a very underdeveloped area in the field. The study reinforces the pedagogical approach and deepens the argument that arts are not merely fun and engaging for students but also elicit deep thinking that can be made visible by way of the arts. Findings explore how assessment tools, such as checklists and rubrics, relate to students' immersion in the creative process. The data includes a variety of arts-based strategies used to assess and shows how to leverage these strategies most effectively within the context of the lesson. The study also highlights the advantages of using the arts to formatively assess diverse learners. The findings of this study align with existing literature on arts integration; however, framing the discussion of the research in the context of Albert Bandura's sources of self-efficacy is a novel contribution to the field.

The broader implications that this study addresses include self-efficacy in the field of teaching and learning. Self-efficacy theory appears in the form of teacher efficacy when

examining teachers' self-belief in their capabilities of impacting students (Tschannen-Moran & Hoy, 2018). This study elevates the role that a specific teaching pedagogy such as arts integration can have on these teaching capabilities. The outcome of this study is even more specific by narrowing in on formative assessment's role in arts integration self-efficacy. This body of research on arts-based formative assessment facilitated by participants with high self-efficacy is a unique contribution to the field of teacher efficacy.

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APPENDIX A

District Survey Prompts for Teacher Self-Efficacy in Arts Integration

Prompt	Self-efficacy domain
I understand the meaning of the term “arts integration.”	Instructional design
I understand the fine arts standards.	Instructional design
I can effectively match arts standards with content standards for a natural and significant connection.	Instructional design
Integrating the arts influences my educational philosophy.	Instructional design
I can effectively integrate visual arts in teaching content.	Instructional strategies
I can effectively integrate music in teaching content.	Instructional strategies
I can effectively integrate drama in teaching content.	Instructional strategies
I can effectively integrate movement/dance in teaching content.	Instructional strategies
I can effectively integrate poetry in my curriculum.	Instructional strategies
I am comfortable with creating arts-integrated assessments.	Assessment methods
I am confident in assessing student learning using the various art modalities.	Assessment methods
I like to plan arts-integrated instruction with an arts specialist in my building.	Collaboration
Integrating the arts influences my view of collaboration.	Collaboration
Integrating the arts influences the learning environment in my classroom.	Learning environment
Integrating the arts influences my classroom management.	Learning environment
Integrating arts influences my view of planning for differentiation.	Learning environment

APPENDIX B

Georgia Department of Education Arts Integration Rubric

ACCESS TO ARTS INTEGRATION				
Criteria	Level 0 **No Arts Integration Program in Place**	Level 1 **Developing Program**	Level 2 **Developing Program**	Level 3 **Creative School Arts Integration Award**
Arts Integration Access	Less than 50 % of subjects and or grade levels are participating in arts integration and arts courses during the educational day.	Two subjects or grade levels are arts-integrated during the academic day.	Arts integration is occurring in all subjects but not in all grade levels or all grade levels but not in all subject areas during the academic day.	Arts integration is occurring schoolwide, in all subjects, and grade levels daily. (Minimum one subject per day)
Underserved Student Participation in Arts Integration Program	The underserved student participation does not reflect the diversity of the school.	A plan is being developed for support and focuses on underserved student populations.	A plan is in place for support, and it focuses on underserved student populations.	The arts integration model has student participation that reflects the populations served within the school by meeting their individual needs.
Student Access to Extra-Curricular Arts Clubs, Field Trips, Competitions, Exhibitions, and Performances	No students are involved in arts clubs, competitions, onsite/online arts exhibits, performances, and/or in-state and national arts forums. The school offers no opportunities for students to attend professional art events such as field trips to museums, theaters, and concerts.	Some of the arts students participate in arts clubs, competitions, onsite/online and/or arts exhibits and performances, and/or in-state and national arts forums. The school offers no opportunity for students to attend professional art events such as field trips to museums, theaters, and concerts.	A majority of the arts students participate in arts clubs, competitions, onsite/online arts exhibits, and performances, and/or in state and national arts forums. The school offers one opportunity for students to attend professional art events such as field trips to museums, theaters, and concerts.	All students participate in fine arts clubs, competitions, art exhibits, and performances at the school, district, state, and/or national level. The school offers opportunities for all students to attend professional art events such as field trips to museums, theaters, and concerts.

Examples:

- Fine Arts are defined as Dance, Media Arts, Music, Theatre & Film, and Visual Art.
- Students are not selected but are included as a whole school model through all content areas.
- There is documentation that all grades and subjects are arts-integrated weekly.
- All students are included in the model (no pull outs or targeted groups).

RIGOR AND RELEVANCE OF ARTS INTEGRATION PROGRAMMING				
Criteria	**Level 0 No Arts Integration Program in Place**	**Level 1 Developing Program**	**Level 2 Developing Program**	**Level 3 Creative School Arts Integration Award**
Characteristic of an Arts Integrated Curriculum	A plan is in development for an explicit and unique curriculum for Arts Integration. The plan is being piloted at some of the school's grade levels or subject areas.	A plan is developed for an explicit and unique curriculum for Arts Integration but is currently implemented only at some of the school's grade levels or subject areas.	There is a plan in place to expand the explicit and unique curriculum from current grade levels to multiple grade levels and to maintain sustainability.	Arts integration is part of the culture of the school, and a plan has been developed and is in place. The plan is continually refined, and input is taken from the community, business, teachers, students, and parents.
Student Rigor & Relevance and Instructional Quality	Most of the learning occurs at the acquisition level. Content knowledge is taught in a silo by discipline, and instruction focuses on knowledge awareness and comprehension of information. Classroom instruction is predominantly teacher-centered.	Most of the learning occurs at the acquisition and application levels. Classroom instruction is predominantly teacher-centered. Student work shows them working on designing solutions to problems centered on a discipline at a time by applying knowledge to new situations.	Most of the learning occurs at the assimilation levels. Classroom instruction is predominantly student-centered, and students extend and refine their acquired knowledge to routinely analyze & solve problems, as well as create unique solutions.	Classroom instruction is predominantly student-centered. Students have the competence to think in complex ways and also apply the knowledge and skills they have acquired.

Arts Integrated Instruction and Fine Arts Instruction	Arts integrated teaching has replaced fine arts specific courses.	Arts integrated instruction occurs in some general education courses, and fine arts instruction in the areas of the same arts used for integrated instruction occurs 1-2 times per week.	Students participate in fine arts enrichment opportunities. Students receive arts-integrated instruction in most subjects and fine arts instruction in the areas of the same arts used for integrated instruction 2-4 times per week.	Students participate in fine arts learning strategies in all classrooms and often demonstrate their learning through an art form. Students receive daily arts-integrated learning and separate fine arts instruction in the same areas used for integrated instruction.
Examples: • The curriculum offers opportunities for students to learn through one or several of the fine arts subject areas. • There are opportunities for students to interact with fine arts professionals to support curriculum. • A specialized arts program is used in conjunction with fine arts integration. • There are opportunities for students to interact with museum/university/arts partners to support curriculum. • A school arts-integration team composed of parents, community, arts, and business partners has been established to maintain sustainability.				
ARTS PROFESSIONAL DEVELOPMENT AND CERTIFICATION				
Criteria	**Level 0 No Arts Integration Program in Place**	**Level 1 Developing Program**	**Level 2 Developing Program**	**Level 3 Creative School Arts Integration Award**
Arts Teacher Certification	None of the arts teachers are certified in the arts content area.	Some of the arts teachers are certified or meet highly qualified status in their arts content area.	Most of the arts teachers are certified or meet highly qualified status in their arts content area.	All of the arts teachers, for every fine arts subject used in Arts Integration, are certified or meet highly qualified status in their arts content area.

Professional Development	Arts integration training has not been provided for general education classroom teachers. Arts teachers have not received subject-specific training.	25-74% of teachers have ongoing arts integration in specific professional learning annually. Arts teachers have received one subject-specific training.	75% of teachers have ongoing arts integration in specific professional learning. Arts teachers have participated in two subject-specific pieces of training.	100% of teachers have ongoing arts integration specific professional learning. A plan is in place for arts teachers to receive additional training in their subject area (separate from arts integration training).
Examples: • Arts integration teachers have tailored professional learning for their specific needs. • Arts Integration teachers participate in a job-embedded or practice-based approach to professional learning. • Arts teachers attend content area state conferences. • Arts teachers participate in professional learning to strengthen arts content knowledge and skills. • All teachers participate in arts-integration courses.				
PROGRAM ORGANIZATION AND ADMINISTRATION				
Criteria	**Level 0 No Arts Integration Program in Place**	**Level 1 Developing Program**	**Level 2 Developing Program**	**Level 3 Creative School Arts Integration Award**
Fine Arts Classrooms	The school does not have a place or plan for performances, exhibits, or arts activities.	The school has access to spaces that can be used for students to perform for one another and exhibit visual art.	The school has multi-use spaces that can be used for students to perform for one another and exhibit visual art.	The school has dedicated spaces that can be used for students to perform for one another and exhibit visual art.
Performance and Exhibition Spaces	Classroom space is not arranged in a way to facilitate arts-integrated learning or meeting of arts standards.	Classroom space is not arranged in a way to facilitate arts-integrated learning or meeting of arts standards.	Classroom space is arranged in a way to facilitate arts-integrated learning or meeting of arts standards.	Classroom spaces are arranged and organized in a manner that is conducive to the outlined use of arts-integrated strategies in the classroom.

Budget	The budget does not include funds for arts integration training, arts equipment, art supplies, artists in residence, and/or arts-related field trips.	The budget consists of limited funds for arts integration training, arts subject-specific training, arts equipment, art supplies, artists in residence, and/or arts-related field trips.	The budget includes limited funds for arts integration training, arts subject-specific training, arts equipment, art supplies, artists in residence, and/or arts-related field trips.	The budget includes significant funds for arts integration training, arts subject-specific training, equipment, art supplies, artists in residence, and/or arts-related field trips.
Examples: • Arts integration supplies and equipment are purchased for the classroom and performance/exhibition spaces. • Room specifications and equipment are conducive to routine arts-integration strategies. • Inventory reflects the needs of the fine arts classes and arts integration into other subject areas. • A separate budget for fine arts courses versus arts integration supplies is included.				
ARTS IN THE COMMUNITY				
Partnerships	There is no business, community, arts, or post-secondary partnerships.	Business, community, arts, and post-secondary partnerships are included in the arts-integrated school plan but are not involved in any in school activities.	Business, community, arts, and post-secondary partnerships are involved in the arts-integrated instructional program 2-3 times per school year.	Business, community, arts, and post-secondary partnerships are Included in the arts-integrated instructional program quarterly.
Parent and Community Engagement	There are no art exhibits, performances, or volunteer opportunities for st udents, parents, and the community to become involved in the school for each of the fine arts areas.	There are 1-2 art exhibits, performances, or volunteer opportunities for students, parents, and the community to become involved in the school each school year for each of the fine arts areas.	There are 3-5 art exhibits, performances, or volunteer opportunities for students, parents, and the community to become involved in the school each school year for each of the fine arts areas.	There are 6+ art exhibits, performances, or volunteer opportunities for students, parents, and the community to become involved in the school each school year for each of the fine arts areas.

APPENDIX C

District Arts Integration Certification Criteria

1. Rigorous & Relevant Instruction	
1.1	Arts integration is occurring routinely schoolwide across all subjects, disciplines, and grade levels.
1.2	Teachers are facilitators of collaborative student-centered learning that encourages critical thinking and creative problem-solving through an art form.
1.3	Learning outcomes taught through arts integration meet evolving objectives both in an art form and another subject area.
1.4	Instruction offers opportunities for students to engage in the creative process and present their learning at various points in this process.
Suggested Artifacts • *Sample Arts Integration lesson plans & assessments*	• *Process boards documenting Arts Integration projects* • *Student work samples and/or digital portfolios*
2. Teacher Collaboration & Professional Learning	
2.1	Teachers and school leaders participate in ongoing arts integration professional development opportunities and ample time is spent reflecting on how these trainings can integrate into classroom instruction.
2.2	Teachers routinely meet to collaborate and plan arts integrated lessons/ units of study with their grade level teachers and fine arts specialists.
2.3	Teachers are working toward increasing content knowledge in all fine arts disciplines: visual arts, music, dance, theatre, and media arts.
Suggested Artifacts • *List of Arts Integration PL sessions offered to staff* • *Documentation of visits to other Arts schools* • *Photos and reflections from trainings*	• *School wide curriculum map is visible (indicating opportunities for arts integration for all grade levels, subjects, and disciplines)* • *Sample lessons demonstrating integration of PL*
3. Classroom Spaces & Budget	
3.1	Classroom spaces are arranged and organized in a manner that is conducive to routine use of arts-integrated strategies in the classroom.
3.2	School has dedicated spaces that can be used for student to perform for one another and exhibit visual art.
3.3	The budget includes allocation of funds for arts related resources such as ongoing art-specific trainings, equipment, art supplies, and teaching artist residencies.
Suggested Artifacts • *School visits*	• *Classroom visits* • *Supplies purchased*
4. Art Partnerships & Extended Learning	
4.1	The school has active and sustained partnerships with arts organizations and/or post-secondary institutions to foster deeper arts experiences for students to work with professional artists in the various art forms.
4.2	The school offers opportunities for students to participate in arts related extracurricular activities and clubs.

4.3	The school offers opportunities for students to attend professional art events such as field trips to museums, theaters, and concerts.
Suggested Artifacts • *Blog/Web posts spotlighting the Art Partners*	• *List & description of Arts partners and programs* • *Photos of Arts partners at school events*
5. Social and Emotional Learning	
5.1	School has designed community art events that are inclusive of all students (reflecting the population of the school and all skill levels).
5.2	Students and teachers identify with being artists themselves. School culture celebrates self-expression through the various art forms.
5.3	Students and teachers use the arts to foster social awareness, empathy and build positive relationships with peers.
Suggested Artifacts • *Photos and videos spotlighting art events*	• *Artist statements created by students* • *Student performances, presentations and interviews*

APPENDIX D

District STEAM School Certification Criteria

1. Rigorous and Relevant STEM Learning Culture		Very Evident	Evident	Somewhat Evident	Not Observed
1.1 School/program has clearly established STEAM culture of learning that is evident throughout the school/program routinely.	Clear shared vision and mission for STEAM culture, including an appreciation for the arts.	4	3	2	1
	STEAM culture can be heard, seen, and felt within the school. STEAM program is branded through public displays (photographs, video clips, and student work samples) highlighting the engineering, design, and/or creative process.	4	3	2	1
1.2 Learners are intentionally provided STEAM focused interdisciplinary experiences integrated with relevant fine arts, math and/or science GSE.	STEAM instruction integrates multiple STEAM disciplines. Relevant GSE for fine arts, math, **and/or** science are the focus of the learning. **Fine Arts include music, dance, theatre, and visual arts**. Arts vocabulary, standards/strategies are routinely integrated into STEAM instruction.	4	3	2	1
1.3 School/program engages in proactive strategies to recruit and support engagement from students in STEM/ STEAM/ Arts-related fields.	Evidence of clubs, groups, learning tasks, etc. that promote awareness and provide access to STEM/ Fine Arts professionals often under-represented in STEM/ Fine Arts fields.	4	3	2	1
	Evidence of clubs, groups, learning tasks etc. that promote awareness and provide access to Arts- related fields.	4	3	2	1
	Program Only Schools – Participation in STEAM program is representative of the demographic population of the school.	4	3	2	1
1.4 STEAM educators serve as facilitators who provide guidance and support of rigorous student-centered learning experiences.	Educators serve as a facilitator of learning.	4	3	2	1
	Learners are confronted with complex problems/projects which require them to think in complex ways and apply the knowledge and skills they have acquired.	4	3	2	1
	Learners encouraged to self-assess (using rubrics, checklists,	4	3	2	1

	etc.) and reflect on their learning. Art standards and vocabulary are included in the criteria used for assessment.				
	Learners are assessed on mastery of relevant GSE content area standards (science, technology, engineering, fine arts, math) integrated into STEAM learning experiences.	4	3	2	1
2. STEAM Learning Experiences and Outcomes		Very Evident	Evident	Somewhat Evident	Not Observed
2.1 Learners work independently and collaboratively in an inquiry-based learning environment that encourages finding creative solutions to authentic and complex problems using the engineering design/ creative process.	Learning integrates the 4Cs – Creativity, Communication, Collaboration, Critical Thinking as well as developing soft skills and teamwork.	4	3	2	1
	Learners engage in investigative research **and/or** apply the Engineering Design/Creative Process to develop solutions to real- world problems.	4	3	2	1
	Students have opportunity to participate in: Robotics teams; Science Olympiad, Science & Engineering Fair; Regional Technology Competition; Fine Arts Clubs; or other locally developed clubs, teams & competitions (These are examples, not required list.)	4	3	2	1
2.2 Learners conduct investigative research to make claims, collect evidence, analyze data and communicate their findings using digital and non-digital resources.	Digital portfolios and written journals contain evidence of learners engaging in short and long-term investigative research projects. Journals reflect evidence of student thinking and attempts to make sense of data collected.	4	3	2	1
	Learners are producers and not merely consumers of technology through the development of multi-media products, digital journals, BLOG posts, websites, coding and programming, robotics, augmented/virtual/mixed	4	3	2	1

	reality tools, Apps, digital probes to collect data, O365 tools, etc.				
	Learners encouraged to self-assess (using rubrics, checklists, etc.) and reflect on their learning.	4	3	2	1
3. Teacher Collaboration and Professional Learning		Very Evident	Evident	Somewhat Evident	Not Observed
3.1 STEAM educators, including fine arts specialists, and leaders meet on a regular and frequent basis to plan, revise and improve learning experiences.	Formal structure with dedicated STEAM planning and collaboration time for all STEAM educators weekly to plan integrated lessons, share/co-create STEAM activities, and plan learning outcomes	4	3	2	1
	Evidence of STEAM PBLs being implemented across courses and classrooms; STEAM learning isn't limited to a single classroom/course/subject	4	3	2	1
3.2 STEAM educators and leaders participate in ongoing STEAM-specific professional learning designed to improve content knowledge of STEAM disciplines and practices.	List of STEAM focused professional learning opportunities and educators who have participated	4	3	2	1
	Evidence of strategies learned in professional learning implemented/integrated into classroom instruction	4	3	2	1
4. STEAM Community Engagement		Very Evident	Evident	Somewhat Evident	Not Observed
4.1 Multiple business, community and post-secondary partnerships are on-going, intentionally connect to STEAM learning experiences and promote awareness of STEM/ STEAM/ Art-related careers.	Partners participate in learning in person or virtually through career fairs, interviews, sponsors, judges, mentoring, and students share evidence of learning from STEAM PBLs in other ways.	4	3	2	1
	Learners have multiple formal, age-appropriate opportunities to engage with STEM/Fine Arts practitioners, community experts and/or other STEM/Fine Arts partners to help them connect new learning with real-world examples and workforce readiness.	4	3	2	1

APPENDIX E

Initial Interview Questions

- From your perspective, what does arts integration mean?
- Can you tell me about a time you integrated the arts effectively?
- Do you have any background in the arts? What experiences led you to teach this way?
- Can you describe those experiences that make you feel capable at arts integration?
- From your perspective, how would you define formative assessment?
- How do you typically facilitate formative assessment in your learning environment?
- Anything you do specifically in your learning environment's design that leads to more effective formative assessment of student learning?
- Can you give me an example of a time when you used the arts to formatively assess students?
- Why did you choose using the arts over a more traditional method for formative assessment?
- What have you observed in your students when you use the arts to assess?
- What advice would you give to someone else trying to use the arts to assess students formatively?
- How did your use of the arts for formative assessment relate to designing the lesson?
- Can you describe the learning environment you have in place when you use the arts to assess students?
- What does collaboration look like in your classroom when using the arts to assess?

APPENDIX F

Post-Classroom Observation Questions

- Can you describe the arts integrated lesson you facilitated?
- Can you walk me through your thought process as you were teaching and assessing the arts integration?
- How did you decide when and how to use the arts as a formative assessment during the lesson?
- Describe how the students responded to the use of arts for formative assessment?
- Were there any unexpected things you experienced during the lesson? How did you address these things?
- Based on how this lesson went, what would you change next time you facilitate this lesson?
- How did this lesson compare to other lessons when you've used arts integration?
- In this particular lesson, did you discover anything specific or measurable about student understanding?
- From your perspective, how does the lesson and the assessment relate to one another when using arts integration?
- In your opinion, what is most important to keep in mind when using the arts as a formative assessment method?

APPENDIX G

Participant Consent Statement

You are being asked to participate in an interview as part of a research study entitled "Exploring the Phenomenon of Arts-Based Formative Assessment: Lived Experiences of Elementary Teachers with High Self-Efficacy Using Arts Integration," which is being conducted by Jessica Espinoza, a graduate student at Valdosta State University. The study aims to explore the lived experiences of general education classroom teachers (grades 1-5) who are highly effective in using arts integration and their perceptions of formative assessment. Eight teacher participants will participate in an interview before and after a classroom observation with the researcher. The study will explore the ways in which teachers with high self-efficacy use the arts modalities for formative assessment of student learning.

You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about assessment practices when integrating the arts into classroom instruction. This study will seek to better understand the circumstances and methods that the arts can be used as a formative assessment. This study on formative assessment will also contribute to the existing literature on teacher efficacy using arts integration.

There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life. Participation should take approximately 2.5 hours in total. The interviews before and after the classroom observation will be audio-recorded to capture your concerns, opinions, and ideas. Once the interview recording has been transcribed, the recording will be deleted from recording devices. During the classroom observation, any identifiable student voices or names recorded during the classroom observation will be deleted immediately from the recording device. This research study and your participation will be kept confidential. Your identifiable information will be replaced with a pseudonym in publications or presentations. No one, including the researcher, will associate your responses with your identity.

Your participation is voluntary. You may choose not to participate, to stop responding, or to skip questions you do not want to answer. You must be at least 18 years of age to participate in this study. Your participation in the interview serves as your voluntary agreement to participate in this research project and your certification that you are 18 years of age or older.

Questions regarding the purpose or procedures of the research should be directed to Jessica Espinoza at jrespinoza@valdosta.edu. This study has been exempted from Institutional Review Board (IRB) review in accordance with Federal regulations. The IRB, a university committee established by Federal law, is responsible for protecting the rights and welfare of research participants. If you have concerns or questions about your rights as a research participant, you may contact the IRB Administrator at 229-253-2947 or irb@valdosta.edu.

APPENDIX H

Protocol IRB Exemption Report

Institutional Review Board (IRB)
for the Protection of Human Research Participants

PROTOCOL EXEMPTION REPORT

Protocol Number: 04439-2023

Responsible Researcher: Jessica Rosa Espinoza

Supervising Faculty: Dr. Taralynn Hartsell

Co-Investigator: n/a

Project Title: *Exploring the Phenomenon of Arts-Based Formative Assessment: Lived Experiences of Elementary Teachers with High Self-Efficacy Using Arts Integration.*

INSTITUTIONAL REVIEW BOARD DETERMINATION:

This research protocol is **exempt** from Institutional Review Board (IRB) oversight under 45 CFR 46.101(b) of the federal regulations, **category 2**. If the nature of the research changes such that exemption criteria no longer apply, please consult with the IRB Administrator (irb@valdosta.edu) before continuing your research study.

Additional Information:

- *Exempt guidelines **permit** recording of interviews (and observations) – provided the recordings do not include **minors (under 18 years).** Recordings are to be used to create an accurate transcript. Exempt guidelines **prohibit** the collection, storage, and/or sharing of recordings. Upon creation of the transcript, the recorded interview session (and observation) must be deleted from all recording and storage devices.*
  - ✓ ***While observing the participant/teacher's lesson, the recording device is to be placed on the teacher, or at the teacher's side, to prevent inadvertently recording a student. Should the device capture a student's voice, name, etc., the researcher must stop recording, and the recording deleted.***
- *As part of the informed consent process, interview recordings must include the researcher reading aloud the consent statement, confirming participant understanding, and establishing their willingness to take part in the interview. Participants must be provided with a copy of the research statement.*
- *To ensure confidentiality of participants, pseudonym lists must be kept in a separate secure file from corresponding name lists, email addresses, etc.*
- *Upon completion of the approved study, collected data must be securely maintained and accessible only by the researcher(s) for a minimum of **3 years**. At the end of the required time, collected data must be permanently destroyed.*

☒ ***Please submit any documents you revise to the IRB Administrator at tmwright@valdosta.edu to ensure an updated record of your exemption.***

Elizabeth W. Olphie 10.02.2023

Elizabeth W. Olphie, IRB Administrator Date

Thank you for submitting an IRB application.
Please direct questions to irb@valdosta.edu or 229-259-5045.

Revised: 06.02.16