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# Student Perspectives on Interdisciplinary Skill Building, Equity and Empowerment through Arts Education and Technology During a Pandemic

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This thesis, written under the direction of the candidate's thesis advisor and approved by the program chair, has been presented to and accepted by the Department of Education in partial fulfillment of the requirements for the degree of Master of Science in Education.

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**Student Perspectives on Interdisciplinary Skill Building, Equity and**

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by

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A culminating thesis submitted to the faculty of Dominican University of California in

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**Abstract**

This qualitative research examined how the arts extend to serve as a tool for equity in supporting students of all backgrounds, language skills, and learning levels toward access and development of acumen for learning in all subjects and disciplines. This research is situated in a theoretical framework encompassing theories of learning styles (Dunn, 2000), art education and equity (Kalin, 2012), and pedagogical approaches to the use of technology (Strycker, 2020). Sixteen students participated in a peer focus group in which they developed, reflected upon, and then co-critiqued an art project that evolved through a six-phase process, and two faculty members were interviewed on how the arts impact education across disciplines. The research found that equitable and autonomous learning increased when students were allowed to express their voices by demonstrating creative visual representation of their responses to project criteria, and could be cultivated through peer interaction, and increasing motivation and growth through skill-building and course alignment which provide alternative methods and insight for communicating personal reflection and voice as a way to engage in real life. The work has significant implications for how students can collaborate, engage in their own learning style, and have agency over their learning outcomes. Arts education gives students the opportunity to explore their ideas and how art is used to communicate their ideas and reflections through discussion and synthesis of projects. Similarly, creating an environment that gives students the opportunities to reflect and communicate their ideas helps teachers collaborate, plan and design lesson activities that are relevant to students' individual learning experiences.

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**Chapter 1: Introduction**

Distance learning students can find it difficult to replicate real life interactions with peers, teachers and administrative personnel. A big part of the student experience is collaborating with instructors, peers and participating in school activities and social events, much of which is absent during the COVID-19 pandemic. Since distance learning courses do not allow for on-campus collaboration, making the most of opportunities to meet other students becomes critical. An important component of classroom learning is the social and communicative interactions between student and teacher, and student and student. A student's ability to ask a question, to share an opinion, or to disagree with a point of view are fundamental learning activities. It is often through conversation, discourse, discussion, and debate among students and between instructors and students that a new concept is clarified, an old assumption is challenged, a skill is practiced, an original idea is formed and encouraged, and ultimately, the students' voice can be heard.

Student learning requires adjustments by instructors as well as students for successful interactions to occur. Scholars suggest that students' descriptive feedback is neither in-the-moment constructivist information gathering nor is it a formalized data gathering process. It is, rather, a reflective conversation between teacher and students wherein students describe their experiences as learners, with the goals of improving learning, deepening trust between teacher and student, and establishing a vibrant, creative community on a daily basis (Rogers, 2006). I have found this to be true by providing an activity that supports the expression of students' voices. For example; the peer to peer art critique where Student (a) in Figure 1 demonstrated their visual art then shared with another student as both exchanged verbal feedback about the artwork.

This environment supports student learning through peer to peer engagement and participation, and produces more in-depth and reasoned discussions than a traditional classroom setting does. However, the advantage of this interaction may not be realized if close connection among the learners is absent. Haythornthwaite et. al (2000) found that students who failed to make online connections with other learners in their group reported feeling isolated and more stressed.

**Statement of Purpose**

The purpose of this research focused on implementing arts education to serve as a tool for equity in supporting students of all backgrounds, language skills and learning levels as access to develop their acumen for learning in all subjects and disciplines. Even though all of the qualitative research had been conducted through a distance learning environment, a significant portion of students were empowered when given opportunities to express their voices in academic work. Creating engaging opportunities provides a foundation for building relationships through peer interaction. There is a gap in understanding how arts education serves as a tool for equity in supporting students of all backgrounds, language skills and learning levels in all subjects and disciplines, especially during a pandemic. Even more specifically, research has yet to be developed to understand from students themselves how art serves their engagement, motivation, and broader application of skills in other courses and areas of their lives. This study is built on a theoretical framework that includes learning styles (Dunn & Dunn 2002), arts education (Kalin, 2012), and online learning pedagogy (Allen et al., 2014).

Historically, arts education has not emphasized assessment. Art experience was placed not so much on learning in art as on art as a tool for self-expression. Gruber an Hobbs (2015) have noted how assessment was a measure of student learning and art was generally relegated to

the category of irrelevant necessity, whereas Davis (1997) purports that the primary objective of student evaluation is to assess the achievement of students which traditionally used methods of assessment of student learning that relied heavily upon application of the western methods using paper and pencil to assess student's retention of acquired knowledge. With the digital revolution many new tools are available to support the use of technology in assessment (Davis, 1997).

**Overview of the Research Design**

The qualitative approach in this study was applied to explore high school art students, teachers, behaviors, values, emotions, and thoughts regarding art education. This research was conducted using a holistic approach as a qualitative study focused on a combination of student survey responses, written self-reflections, focus group art evaluation and product samples. The teacher and administration interviews were conducted separately through survey questionnaires. The research was based on three central questions; How does student voice in art contribute to equity and education? What do art students think about how art education impacts their academic performance? What interdisciplinary connections exist between arts education and the broader curriculum?

The research was conducted at a suburban school district located in northern California. The school district serves over 3000 high school students across four different campuses. 53.4% of the student population identifies as Hispanic/Latino, 15.5% Asian, 11.2% Black/African American, 9.0% Filipino, 8.6% Caucasian, and 2.3% other ethnicities. 62.4% of the total population were enrolled in a "Free & Reduced Lunch" program.

There were sixteen student participants who ranged in age from 14 to 18, and self-identified as male, female and other. Both teachers were colleagues from the same high school who had between 15 to 23 years of experience as educators. During the 3-5 weeks of the study,

students in the peer focus group met twice a week (online) to provide and receive input on their

art project. Data was collected from student written visual responses and observational peer

engagement exhibited by the students and in-person interviews from the professional educators.

The researcher is a professional art educator who had previously worked with both student and

educator participants in the study. To the greatest degree possible, the researcher sought to

eliminate any personal prejudice during the study's execution.

**Significance of the Study**

The research revealed three major findings. First, students found empowerment in

connecting language with symbol, and second, discovered engaging opportunities for building

relationships through peer interaction. The third emergent finding is that there is an invisible

thread based on skill building through interdisciplinary course alignment.

Students who are offered opportunities that provide for their voices to be expressed in

relevant art activities, such as the journal entries and peer critiques, feel a sense of value and

agency. Further, what automatically develops from the new experience through the activities

increased academic engagement as a result of emotional and social interrelatedness.

The significance this study is intended to bring is awareness and value to art education.

Student voice can provide valuable cross-curriculum learning and growth opportunities to a

diverse range of learning styles through a combination of common symbolic arts language and

peer focus group activities.

*Research Implications*

This study emphasizes the importance of allowing students to be collaboratively engaged

in their art education and learning experiences through sharing their ideas and feelings. Students

must be given the opportunity to speak up for themselves and collaborate on the best way to

learn educational material. The results of this study highlight the importance of empowering student voices by presenting experiences in art classes that speak to popular language acquisition, such as symbols, shape, form, and space that visually reflect a vocabulary to communicate. This practice would aid in bridging the divide between various learning types, implying improved understanding and equity learning. Additionally, implementing activities that encourage students to present their work in a larger class discussion identifying historical attributes of art can provide broader feedback, further connection and engagement. Providing students the opportunity to experience real life events related to lesson activities such as political demonstration art exhibits to stimulate deeper thinking.

Research findings indicate that policies aligned with subject curriculum and art education across all disciplines provide students reinforcement of holistically learning content and objectives while providing greater equity among students with different learning styles.

**Chapter 2: Literature Review**

This study examines how the presence of an arts education impacts learning within a high school community through the voice of visual arts students and teachers. There is a gap in the literature in how the arts extend to serve as a tool for equity in supporting students of all backgrounds, language skills and learning levels in access and developing their acumen for learning in all subjects and disciplines. Even more specifically, research has yet to be developed to understand from students themselves how art serves their engagement, motivation, and broader application of skills in other courses and areas of their lives.

The visual arts provides a unique opportunity to bring attention back to the students and the discussion of how art contributes to the overall academic experiences through a variety of visual arts activities. Research has found that educational programs that integrate learning experiences in the arts lead to positive educational and career outcomes and open up new ways of communicating that can bring communities together and provide opportunities for all students to express their creative intelligence. The Education Commission of the States (2019) supports the idea that the arts can play a pivotal role in improving educational outcomes for all students. Leaders need to look beyond the traditional methods of student achievement and find innovative solutions for ensuring that all students have the opportunity to experience a well-rounded education, one that pushes beyond the traditional subjects and includes the arts.

This study contains three themes that are related to how an arts education benefits students and teachers. Learning styles, arts education, and online pedagogy in a technological age are critical to raising awareness of the benefits of arts education for our students.

**Learning Styles**

Learning style refers to an individual's method of metacognition of new information, usually done through sight, touch and sound to validate ideas in our brain. The Dunn and Dunn (2002) school-based model points out four key learning styles; visual, auditory, tactile and kinesthetic. Accordingly, visual learners prefer to use pictures, graphs and images to organize and communicate their thoughts, as opposed to auditory learners who retain information better when it is delivered through sound or speech rather than written form. These distinctive modes of learning extend also to the other two categories of tactile and kinesthetic, and students may embody the preferences of more than one, often relative to educational context and climate.

The different learning styles are relative to optimum learning environments that enhance aspects or characteristics of a specific style (University of Illinois Springfield, 2018). These learning styles are broken down by five elemental characteristics—environmental, emotional, sociological, physiological and psychological—with regard to specific environments and instructional approaches. This model was inspired by a desire to educate teachers and parents to think about and motivate students, while optimizing their education based upon their individual learning preferences (University of Illinois Springfield, 2018). Dunn and Dunn's model recognizes that children learn differently, and therefore require a different approach to understanding a variety of material. This model doesn't prescribe the idea of one style for each learner, but rather offers a comprehensive set of elements that can inspire all learners.

According to Bruff (2011), each learning style is complemented by certain attributes to obtain optimum learning potential, and new material is best learned when it is reviewed multiple times and through multiple modalities. Teaching modalities like visual arts can offer a deeper, more conceptualized learning experience and visuals can provide an opportunity to see the "big

picture" of how concepts are related. Visuals can also promote improved retention providing easier retrieval of information (Bruff, 201l). As one example, Csapo and Haven (2006) examined the learning styles from 2,000 students who completed a questionnaire to determine their learning style. The students were grouped by type: auditory, visual, or tactile/kinesthetic. The study was used to bring understanding/awareness to faculty members about the teaching and the process of kinesthetic learning. Furthermore, it has been demonstrated that students' learning styles are influenced by their educational experiences (Csapo & Haven, 2006). An environment that requires extensive problem solving may draw on a student's abilities with a kinesthetic learning style. The importance for teachers is to have knowledge of learning styles to help design learning activities that can align and support all students.

### *Assessment and Learning Styles*

Gruber and Hobbs (2015) documented how historically, the field of art education has not emphasized assessment. For a large part of the 20th century the significance of art experience was placed not so much on learning in art as on art as a tool for self-expression (Gruber & Hobbs, 2015). Assessment was a measure of student learning and in art was generally relegated to the category of irrelevant necessity (Gruber & Hobbs 2015).

Beattie (1998) has shown that the primary objective of student evaluation has been to assess the achievement of students, traditionally using assessment methods of student learning that relied heavily upon the application of the western methods using paper and pencil to assess students retention of acquired knowledge. According to Seitz (1989), traditional methods of testing children's intelligence that rely upon pencil to paper to determine intellectual competence are narrow in terms of measuring intellectual functioning and unfortunately a consequence of western education which negates and devalues a wide range of intellectual skills, particularly

bodily kinesthetic intelligence. Seitz (1989) points out that the traditional methods of thinking that rely on these western studies present the "Cartesian Dualism"—Descartes theory colloquialized as "mind over matter"—which invalidates the role of kinesthetic learning as crucial to cognitive intelligence.

Hartjen et al. (2013) argue about measuring learning objectives based upon the use of those objectives and outcomes in higher education. The opposing view draws upon the creative arts as a deeper approach to learning. The argument claims that by using the creative arts as a holistic learning method of measurement we can contribute to the exploration of alternative learning methods even if study groups are not experienced in the arts education. The different theories about kinesthetic based art as a valid cognitive intelligence from an observational method are discussed.

Beattie (1998) identified approaches to evaluating creative art students, including observational strategies for self-reflection among all participants through group discussions and oral responses. Portfolios, which are used to collect and store final artwork, sketches, working drawings, and notes, as well as visual journals or sketchbooks that represent ideas and thoughts along with preliminary picture drafts or photographic elements entered on a daily basis, are among the evaluation methods used in assessing creative arts students (Beattie, 1998). Integrated performances are used for a self-reflective assessment based upon an individual student's own experience which is usually done through open-ended written responses of learning material or oral group critiques that encourage creative thinking.

Since the advent of digital technology there are increased advantages that support the use of technology as an alternate mode of student assessment, specifically due to increased test security provided by programmed security systems (Beattie, 1998). With considerable disruption

to education caused by the recent COVID-19 pandemic, reliable information about the current level of comprehension of a student is particularly important to ensure that all pupils have equal opportunities for learning and understanding quickly. Therefore, technology can be used in several different ways for instant evaluation, making it align is key to successful learning to understand what students know and what they don't know.

*Kinesthetics & Skill Building*

According to Dunn and Dunn (1992) students have a variety of learning modes and styles, as well as distinct ways of learning, depending on how they retain and absorb data. Visual learners are those who understand and remember information better when viewed visually. Howell (2005) acknowledged auditory learners are those who learn best by using the sense of hearing. Kinesthetic learners are the ones who learn best by using the sense of touch. For example, some students review data well by looking at things visually, while others acquire new information through sound-related input, while others will find it difficult to obtain data unless they have the opportunity to experience real-life exercises. Students are often involved in social engagement with kinesthetic learning, which can improve problem-solving skills and can apply imagination through self-expression (Dunn & Dunn, 1992). Because of these many benefits of kinesthetic learning, education is trending towards interactive teaching techniques that rely on kinesthetic development because it can meet the needs of a diverse population of student learners. (Dunn & Dunn, 1992).

**Arts Education**

According to McCarthy et al. (2005) visual arts, "opens up new ways of communicating and seeing the world and can bring communities together by creating social bonds, provide opportunities for all students to express their creative intelligence and help close the gap that has

left many children behind" (p.1). As arts budgets decrease, the importance of an art education remains largely ignored in the field of education.

There is a gap in the recognition in how the arts extend to serve as a tool for equity in supporting students of all backgrounds, language skills and learning levels in access and developing their acumen for learning in all subjects and disciplines. Even more specifically, research has yet to be developed to understand from students themselves how art serves their engagement, motivation, and broader application of skills in other courses and areas of their lives. The arts can play a pivotal role in improving schools and educational outcomes for all students. Leaders need to look beyond the traditional methods of student achievement and find innovative solutions for ensuring that all students have the opportunity to experience a well-rounded education, one that pushes beyond the traditional subjects and includes the arts (Education Commission of the States, 2019).

Arts education influences and increases student engagement and provides enrichment opportunities that develop skill aptitude. The visual arts provide a unique environment that brings attention back to students' metacognition through art activities of written reflections, self-assessment, and peer critiques (McCollum, 2019). Educational programs that mutually integrate learning experiences in the humanities and arts with science, technology, engineering, mathematics, and medicine are claimed to lead to improved educational and career outcomes (McCarthy, 2005).

Kalin (2012) approaches art education from the perspective of pedagogy. Kalin believes there has been a shift in pedagogical and curatorial practices used in higher education of contemporary art that currently impact our educational institutions and the critical practices that are symbolic of art education at the graduate level. Institutionalism is symptomatic of the current

state of higher education, which are established activities that take place within the institution and are motivated by educational objectives. These issues motivate and inspire educators to consider alternative project approaches to art expression (Kalin, 2012). There are several types of media that offer opportunities for students to explore ways to disrupt the normalizing patterns inherent in the provision of art education. The traditional models of pedagogical conformity seem to provoke an oppositional movement in search of a more playful approach and allow for a range of artistic points of view (Kalin, 2012). The tactile advantages encountered in art education and the encouragement of challenging learning environments compared to conventional classroom approaches brought focus to the limited attention provided to arts education in general by western culture (Kalin, 2012). Bishop (2007) notes that "The straitjacket of efficiency and conformity that accompanies authoritarian models of education seems to beg for playful, interrogative, and autonomous opposition". Art is just one way to release this grip" (p.89).

Wolf (1983) explains how our educational culture is predominantly focused on the visual exercise of reading and writing as fulfilling the call for tactile forms of learning while withholding the belief that art is a tactile and embodied mode for academic development. Why has art been given so little attention when it has so much to offer?

In a controlled study Zivcakova (2011) compared three groups of students who were divided into pencil and paper note taking, word processing note taking and technology note taking groups. The students were measured for their levels of multitasking abilities during an authentic classroom lecture. The outcome of the study revealed that traditional pencil and paper group note takers outperformed those who relied on technology, indicating that technology used in a classroom can serve as a distraction rather than an important instructional tool (Fried, 2008).

In a separate study Marshall and D'Adamo (2018) discussed the value of art education and what it can offer all students in order to expand and refine metacognition and develop conceptual skills. This perspective highlights how an art course can expand metacognition for all students and focused on basic art skills; thinking, learning and creative inquiry. The key aspects of these art thinking lab courses focused on safety, inclusivity of all students, learning over time, clear and concrete learning matter and expectations, comprehensive use of common vocabulary, team group and independent work and small group critique for reflection.

### *Building Community*

There are persuasive examples illustrating the ability of arts education to improve student learning and well-being and, by extension, the protection of their communities. As an artist who has experienced arts life-changing power in my own educational and professional experience, and as a tenured teacher in secondary education I know that investment in arts education leads to improved academic performance, increased public participation, and racial equality. Kisida and Bowen (2019) suggests that more empathy and concern for others is demonstrated by students who have regular access to arts instruction with its capacity to engage minds of all ages and to inspire them. Longitudinal research suggests that arts education increases literacy, advances the achievement of math, engages and motivates students to learn beyond education, by equipping students with innovative skills, problem-solving skills and the ability to collaborate and connect effectively, the arts prepare students to take their place in the workforce (Gilbride, 2013). According to the National Coalition for Core Arts Standards (2014) the value of an arts education benefits the student because it cultivates the whole child, gradually building many kinds of literacy while developing intuition, reasoning, imagination, and dexterity into unique forms of expression and communication while defining that equity in arts education is the right

for every student to have access and opportunity to engage in high quality standards based arts education regardless of race, culture, language or socio-economic background.

The Royal Shakespeare Company et al. (2018) conducted a three year study called the "Tale Project" involving a partnership between 33 schools that support arts in education. The Tale project set out to explore why the arts are currently under siege and how teacher pedagogies in art and student learning experiences are impacted.

There has been a steady decline in secondary enrollment in arts subjects, as well as a reduction in the amount of time allotted to the arts. The study challenged and attempted to disrupt the current decline in secondary enrollment art subjects. The primary belief in the Tale Project study is that schools have an ethical responsibility to prepare engaged students as future citizens who become culturally responsible.

Cultural rights are essential for social sustainability, social justice, and cultural inclusion in the larger society. The authors of the Tale Project consider arts education to be an essential and wider component of cultural education, which identify the Declaration of Human Rights`Article 27" as an essential principle for student education. This article enunciates the Universal Declaration of Human Rights with the statement that: "Everyone has the right to participate in the cultural life of the community." The study focused on elite schools within affluent socio-economic areas as opposed to a broader more diverse population of students and teachers. The results of the study revealed that arts classes provide students a greater sense of agency and freedom to explore and experiment. Additionally, students claimed arts lessons helped them to develop self-esteem and confidence through peer interaction and an outlet to release academic pressure, and attributed their intellect, critical thinking skills, happiness and well-being to the arts, as well as how the arts relate to how they choose to live their lives.

Marshal and D'Adamo (2018) addressed what art education can offer non-aspiring art students in order to expand and refine metacognition and develop conceptual skills for all. This literature review gives a perspective on how an art course can give rise to expanding metacognition for all students. An art education should offer students a deeper view of how art contributes to a variety of academic experiences and be reciprocal in the use of key features with regard to metacognition and learning. Experiencing and exploring with new information, materials and tools as well as using a common vocabulary to express and develop conceptual skills are the foundation of an arts education. These skills go far beyond the classroom. Students learn how to use their physical body to manipulate tools and build dexterity and strength. In art they learn to self-identify and communicate with confidence in real life, making art accessible to all students and fostering both collaborative and independent work for self-reflection and curiosity.

*Arts and Equity*

Kraehe (2017) explored a narrative about multidimensional arts equity theory that was inspired by Richard Delgado, a theorist of Critical Race Theory (CRT) in which a theoretical paradigm in the social sciences examines society and culture in terms of race, law and power categories, that rely on six guiding principles; distribution, access, participation, effects, recognition and transformation. These principles expand upon the traditional narrative of material, symbolic and the experiential scope of arts education with regard to equity and social justice. The student's focus is to bring voice to the ethical ambiguities that art teachers encounter on a daily basis. Questions are explored in a  praxis-oriented manner such as, "What is needed to create a story of equity as a fundamental part of thinking in art education?" (Kraehe 2017, p. 3).

Equity and equality are mistakenly used interchangeably but have very different contexts which are significant to art educators (Kraehe, 2017). As Freire (1970) notes, "Equity is not simply about overcoming ignorance about our own biases. It is also about trying to understand the various ways teachers contribute to the institutional maintenance of social, economic, political, and environmental inequalities" (p.25).

In order to promote transformational equality, we must awaken to our own social and cultural biases that establish a relationship of distance and alienation with Art. Equity education allows students not only to learn practical skills, but also to use these skills to become successful agents of social change.

**Pedagogy and Technology**

Online instruction through the Internet is the fastest growth area within higher education in many countries and this trend is set to escalate particularly with the evolution of massive open online courses. Many K-12 education schools began using distance learning online as a method of delivery of coursework in early 2020, as a result of the COVID-19 pandemic. Allen et al. (2014) point out that the method of constructively aligning teaching, learning and evaluation of content curriculum relies on collaborative input loops, and including feedback from students to use in the form of their responses to our assessment tasks and feedback from students on how to learn more effectively. Setting consistent results for learning is the first stage of this process (Allen et al., 2014). However, while online course delivery has the potential for efficient, deep learning, there may also be a number of pitfalls. The introduction of information and communications technology in schools calls for a degree of improvement in pedagogy and practice. The position that art education plays not just in providing an authentic context for the

use of emerging technology, but also in providing insight into the essence of understanding information communication technology capabilities (Strycker, 2020).

Mathewson (2015) examines theoretical approaches to visual art teaching practices. There has not been a lot of research with respect to secondary visual arts education and the teachers who navigate the complexities of their lived experience. Mathewson's study recognizes the need to examine the voices and possible practices of visual art educators. The framework of this inquiry is based upon four principles that govern the methodological approach to designing an informed based practice that addresses the complexities of bringing together the body of knowing and teaching visual arts at the secondary level. The complexities have not changed form due to distance learning; they just live in a different environment which seeks to identify the commonalities between the theories, principles and practice to help illuminate the potential for conceptualizing ways to navigate the complexities of teaching (Mathewson, 2015).

There is a lack of educational instructional technology journals for training K-12 art teachers who use technology as a tool in teaching art (Mathewson, 2015). One of the results indicated that elementary education found the use of technology increased higher order thinking skills among study participants, while secondary art education using technology increased and promoted desire in multimedia arts and digital portfolio creation (Mathewson, 2015). Art teacher education (K-12) technology use tends to get overlooked in educational and instructional technology journals, and preferential coverage is mostly given to subject areas (language arts, mathematics, science, and social studies), therefore, leaving a gap within the field of educational and instructional technology with regards to the fertile field and experience of the arts for educators and consequently students (Mathewson, 2015). Technology integration largely emphasizes general teacher preparation as professional development, but a comprehensive

understanding of current technology use for art education would go a long way to better prepare future art teachers, and can be woven into other classes (Strycker, 2020).

All educational institutions must rely heavily upon technology during this time of a global pandemic. According to Strycker (2020) there is a "lack" of materials for the purpose of training art teachers to effectively use technology as a tool for teaching visual art.

Technology is certainly an asset for art education to teach the use of tools and materials that draw on kinesthetic creation and metacognition of conceptual thinking skills. Most schools that offer chromebooks for distance learning don't pass muster when it comes to teaching art skills. These devices are very limiting and only provide the user a platform to use a keyboard or variable track pad for creating. Art is not a typing class. Currently, there is a growing voice among educational instructional technology faculty exploring the crossroads between technology and art education such as three-dimensional (3D) printing which appears in art education and art trend journals (Smith, 2014). Some art teachers have been through programs more recently, and newer technology is more easily accessible with the availability of Internet re-sources, which might contribute to other issues of training needed. This could mean that technology integration courses could be put into a specific model with examples of technology integration for potential art teachers with examples of how local art teachers use technology in their classrooms. If we want to preserve the visual arts, we must start paying attention to the educational training needs and benefits of our educators and student body.

**Conclusions**

The purpose of this review is to help the reader understand the different aspects posed by the research on the implicit benefits for students and teachers of an arts education. This is extremely important in our current educational climate, with declining school budgets and visual arts losing

popularity and funding and resulting in a lack of identity. In addition, the COVID-19 pandemic, for educators, is an adaptive and disruptive challenge, for which there is no defined playbook that can direct or guide our responses. And while there is a great deal of research and debate that supports strong programs in visual arts in secondary education, a certain pre-existing approach to art education still exists. More research is needed to provide a better understanding and awareness of how an art education contributes to the variety of developmental skills that address the whole student. Can we redirect our conversations about how we think and address the validity of art education in our academic environment?

**Chapter 3: Methods**

The purpose of this research is to better understand how students are impacted and empowered through art education and how arts classes can be used as a highly effective multidimensional process that addresses auditory, visual, tactile, kinesthetic, metacognition skills, SEL and equity within a secondary education population. The research activities included, student surveys, an art project, observed art critique, site principal and teacher interview questionnaire. This research was conducted primarily online at the three high school sites within the San Lorenzo Unified school district, where I am the teacher of record.

**Research Questions**

This research was conducted using a holistic approach as a qualitative study focused on a combination of student survey responses, written self-reflections, focus group art evaluation and product samples. The teacher and administration interviews were conducted separately through survey questionnaires. The research was based on the following essential questions:

- How does student voice in art contribute to equity and education?
- What do art students think about how art education impacts their academic performance?
- What interdisciplinary connections exist between arts education and the broader curriculum?

**Description and Rationale for Research Approach**

My research was informed by a constructivist and philosophical worldview to investigate the importance of art education and its impact on students. Because of the complexity of art education, a mixed method approach focusing on qualitative, empirical evidence was used to collect individual informational data to understand the impact of art on the student participants. (Creswell & Creswell, 2018).

The study imposed a qualitative approach to data collection and a constructivist philosophical worldview. A constructivist approach seeks to interpret the subject's truth based upon their perception of the world around them. These perceptions are not etched within each individual but rather from the interactions with others (Creswell & Creswell, 2018). In my research, the peer critique offers a platform that allows students to interact and engage with one another. Learning and relationship building from this interaction lead to self-confidence and create agency over their work. To capture student experiences, journal entries were used as a method of visually communicating a story without relying on traditional text entries. Dunn & Dunn (2000) reference visual and kinesthetic learning style as a means to observe differences in which students respond to instructional material.

**Research Design**

My research sample sought to explore student and teacher attitudes, beliefs, feelings and thoughts about art education. The process of this research included a selection of volunteer high school students (9th-12th grade level), and teachers from northern California whom I have an established working relationship within the school district at which I am a teacher of record.

*Research Site and Entry into the Field*

The school district serves over 3300 high school students arranged between four different campuses. The student population included, 8.6% Caucasian, 53.4% Hispanic/Latino, 15.5% Asian, 11.2% Black/African American, 9.0% Filipino and 2.3% other Ethnicities. Of this student demographic, 62.4% were enrolled in a "Free & Reduced Lunch" program and their spoken native languages include, English, Spanish, Cantonese/Mandarin, Filipino (Tagalog), Arabic and Vietnamese.

*Participants and Sampling Procedure*

All participants were invited through their connection to the school sites at which the researcher works. All student participants were enrolled in a beginning and advanced art class from two separate secondary high schools within the same Bay Area school district. This scope and nature of this research project was introduced to the beginning and advanced art student participants during distance learning synchronous class sessions. Interested students were provided with a consent form sent to their parents or guardians for permission to participate. The participants in the study were 16 high school beginning and advanced art students. The students were equally split between female, male and self-identified persons and attended two schools in the same district in northern California. Their grade level ranged from 9th to 12th grade, and lived in a mixed socioeconomic neighborhood within the same county.

The two teachers that were included in the research interviews were part of the core faculty from one of two school district sites. The teacher interview participants were of mixed ages and had been teaching a variety of core and elective courses within the district and were provided with a consent to participate form.

*Methods*

The data collection was conducted through interviews, written survey questionnaires, peer engagement observation and product samples. The researcher conducted a study using a qualitative approach to transform and address some of the fundamental gaps in education by understanding how an art education impacts students and contributes to the practice of art instruction to help expand the boundaries of knowledge in art education.

The students in this research were asked to participate in a peer focus group in which they were given a 3-5 week art project that evolved through a six phase process. The students' focus

group interviews took place online during class sessions twice a week adhering to distance

learning protocols. The peer critique grouping included an aspect of participatory action research

method (PAR) which focused on a flexible observational data collection.

The 1st phase was to establish a baseline theme for their art project subject matter in

which they were prompted to research and discuss as a group to identify subject focus for one of

the following; a global event, identity, community or empowerment issue. Following the

discussion each student was given a survey questionnaire (See Appendix A) about their selected

research subject in written form. In the 2nd phase, students were asked to write a daily reflection

journaling their daily intentions, thoughts and feelings about their creative art making process

and experience (See Appendix B for journaling prompts used in phases 2-4). In the 3rd phase,

students were asked to draw 8-10 thumbnail sketches of their selected art project idea or theme

based upon their research and list their medium and materials. In the 4th phase, students began

production on their respective art product. In the 5th phase, students were invited to participate in

a group oral critique following completion of their project. For the final phase, students

completed a written exit survey (See Appendix C). This research project strategy was intended to

offer the students a broader learning experience by building upon their kinesthetic strengths and

giving a voice to their creative expressions, thoughts and feelings about their art experiences.

This shared learning experience provided a window for students to reflect upon their individual

process of creating art and the differing perspectives and impacts that art symbolizes while

empowering them to identify with their own learning.

Teacher interviews consisted of 20 minute online or phone conversations. Participant

teachers were provided with interview questions (See Appendix D) ahead of time and notes were

taken during the interviews. The teacher participants gained understanding of experiences and personal views of students' views on how art impacts education across disciplines.

*Data Analysis*

Data from the interviews and surveys were collected and automatically stored in Google Forms prior to coding and triangulating (Creswell & Creswell, 2018). Survey data was collected and analyzed individually then assembled to achieve a holistic assessment. Interview and observation data were documented using analytical memos and categorized coding was used to create a concept map and open coding based on the lens of constructivism (Creswell & Creswell, 2018). To document data about the group and teacher, the researcher wrote analytic memos immediately following the interview discussions. Concept mapping was utilized for further exploration of the data by sorting the codes into categories to search for similarities, differences or gaps in the data. Themes emerged through the analysis of the concept map and written reflections on the findings were documented. The researcher wrote descriptions of the themes identified to confirm their relevance to the research questions. During the analysis of the data, the researcher sought information that represented the participants' experiences examining any commonalities about how the students were feeling and how the teachers and administrators perceived their student's feelings and actions following art activities.

*Validity*

Researcher bias is a possible threat to the validity of this study. As an arts educator, the researcher is a strong proponent of the value of arts education in particular visual arts. The researcher wanted to determine methods to improve its implementation of art across curriculums, by acknowledging student voices in the mix which likely affected how data was interpreted.

Other possible biases that may have influenced the validity of the study included that the researcher was a new teacher of less than four years within the district of record. It is the belief of the researcher that new teachers are not perceived through the same lens as more tenured faculty, and therefore, have less influence or value to effect change. The body of student research exemplifies how art education can contribute to positive learning outcomes determined on collaborative art activities.

The researcher used theory triangulation to invite interpretation beyond the researcher's point of view and to enhance validity of findings and research methods. This triangulation assisted with reducing the probability of systematic bias due to use of a specific method (Maxwell, 2011). Triangulation provided comparisons that helped to identify the vulnerabilities, concerns and significance of this study. The researcher had prior relationships as the teacher of record during the 2019-20-21 school years and used a focus group technique to observe participants, which provided the researcher with a more revealing image that was detailed and determined to be rich data (Maxwell, 2011). Also, respondent validation was collected from participant feedback through interview questionnaire surveys and feedback iteration to identify and confirm any discrepancies or misinterpretation of intended meaning of participants' perspective (Maxwell, 2011).

**Chapter 4: Findings**

This project intended to examine how the arts can serve as a tool for equity in supporting students of all backgrounds, language skills and learning levels in access and developing their acumen for learning in all subjects and disciplines. Research has yet to be developed to understand from students themselves how art serves their engagement, motivation, and broader application of skills in other courses and areas of their lives. Three major findings emerged through this research. I found that equity and autonomy is experienced when students are given the opportunity to express their voices on subject matter that has personal significance or influence for them. Additionally, I found that creating engaging opportunities provides a foundation for building (represented by a student's illustration of a cannonball that symbolizes the destruction, dismantlement or loss of something valued) relationships through peer interaction. Finally, an invisible thread in art education connects subject matter knowledge to other class subjects which contributes to increasing motivation and growth through skill building and course alignment. When this project began, it was driven by a desire to understand the impacts of art education through the lens of students' reflections who are actively enrolled in art classes. Additionally, this project sought to identify the ways in which art can provide an alternative form of communication through individual self-expression. During data collection, an overarching and recurrent theme emerged, namely through student samples that illustrated the emergence of a common language in visual form. This visual art form suggested communication could clearly be accessed by other learning types, regardless of personal characteristics, attributes, or academic interests.

**Student Empowerment in Connecting Language with Symbol: The Cannonball**

The students were asked to record their creative process using sentence prompts as part of a five-part project in which they were asked to illustrate a visual representation of answers to questions rather than text alone such as, "What is your reasoning for choosing your stand." The assignment was given to students as a prompt to create a foundation for peer interaction based upon student research of project themes. The project involved journal entries to determine a self-selected subject matter that gave voice to a global issue of interest for the students. The first journal entries were established to give students the opportunity to think beyond their art class and choose a current issue that could provide a starting point with which they could research and think about on a deeper level. Subsequent entries focused more on personal reflections related to individual perspective on art. One sophomore student in the study responded by drawing a cannon firing at a decaying wall, symbolizing the abuse of human rights, and then colored the cannon red to reflect their concern over the issue (figure 1). In general, this student had been reserved in our Zoom class sessions and only sometimes reached out to engage or verbally communicate. The assignment invited this student to effectively express their repressed speech voice through the journal entry process.
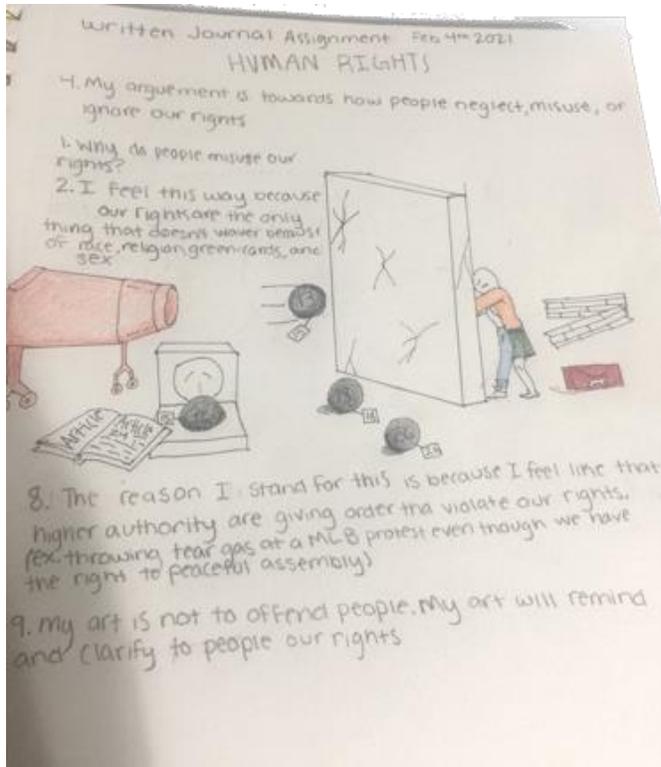
*Figure 1 Student (a) Journal Entry #2*

This project also helped students to recognize a subject matter for their research. Students

(a) and (b) represent beginning and advanced art students who had some previous art education

training. In "Journal Entry #2 - Five Questions", the student cohort was asked to demonstrate

their comprehension of five out of ten of the following questions:

1. What are some other questions that come to mind? (about your issue)

2. Why do you feel the way you do? (about your issue)

3. What are your arguments for or against? (about your issue)

4. What – or who – has influenced your decisions.

5. What is the "flip side" of your issue?

6. What might the other side have to say? (about your issue)

7. Can you see their point of view?

8. What is your reasoning for choosing your stand?

9. Is your artwork intended to offend?

10. Who would be offended?

In conjunction with their illustration, student (a) presented the following quote in their Journal Entry #2 to support and reflect their passion about the subject of Human Rights.

I would like to voice... how some people are abusing our rights or are misusing our rights. For example, when Trump separated kids from their parents and forced them to live in a bad living environment is breaking our right to have adequate living standards and the right of peaceful assembly.

Clearly, student (a) believed that their inalienable rights as a human being and citizen were being abused and eroded by a mechanism that was not in their control. There are many subtle details displayed in this student's work that communicate their thoughts and feelings about the subject matter questions. For example, the cannonballs have hang tags attached, depicting "green cards" that represent a group of people who identify as being marginalized and affected by the misuse of human rights. Another detail in the foreground of this illustration is an open publication exposing pages of "Article 24" of "The Universal Declaration of Human Rights" which establishes that "Everyone has the right to rest and leisure, including reasonable limitation of working  hours and periodic holidays with pay." The students' ability to relate to a deeper level of skills implies the requirement of analytical and visual thought to illustrate detailed visual imagery of communicating without using textual language is illustrated by their expression of information. This remarkable display of ability exemplifies how arts instruction can broaden and open channels of connections.

*Opportunity For Other Forms Of Communications*

Art has been used to express ideas in a visual context that can transmit ideas and help students communicate their voices in a visual format. It aids in deciphering and send messages, without saying a word. This is accomplished through the elements and principles of art, and techniques that can be viewed as messages. Art is a communicative and actively engaging learning process of creating, expressing, interpreting and responding. Another example is student (b) who focused on "Global Warming" as the subject of their Journal Entry #2. This was done in a format that was similar to that of a student (a). However, when I looked at this student's visual art imagery, I realized that it was a little less detailed. The student did not explain or answer the question as to "why" they feel or think this way. Instead they generalized in written text and then placed the task of interpretation upon the viewer of their imagery. Specifically, the student is addressing two different issues in their response. One is "Global Warming" and the other is "Equality". The only illustration reference to global warming is the drawing of a small image representing a building with lines indicating smoke coming from a flue (figure 2). Also, the student draws arrows in a specific arrangement to direct the viewer's eye around the illustrations circulating around the drawings that indicate a connection to the second issue of equality.
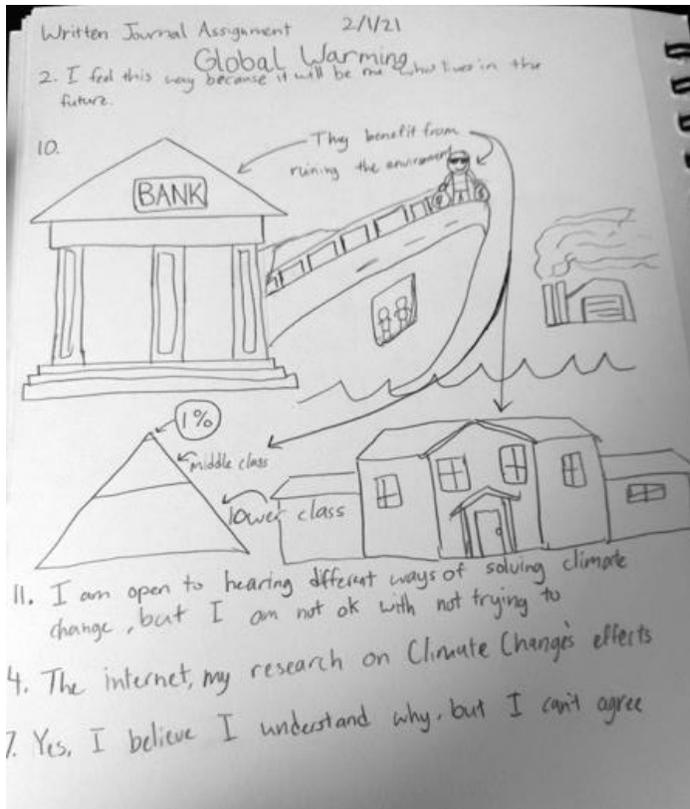
*Figure 2 Student (b) Journal Entry #2*

Student (b) offers a visual representation on the subject of global warming by first stating the position of concern in textual form then connecting this information and transforming the interpretation into a visual drawing with directional arrows for the viewer to follow a sequence of images that read as a story of the subject. This creative approach to deliver information in an alternate way affords the student the ability to reach a broader audience to engage and communicate student voice. The visual arts provides the opportunity for students to explore their ideas and express how these ideas can be translated to communicate and reflect discussion and synthesis of projects. Based upon the previous students' visual illustration sample it was possible to recognize the relationship between their thinking and expression about how climate change is connected to economic and social status, regardless of the written textual content.

*Notable & Quotable*

The group of art students were given a prompt to choose from a variety of global issues that they wanted to give voice to and that directly impacted their lives and the lives of others. The following direct quotes are presented from three students' reflections. These reflections express their voice for change on specific topics from their journal entries. Figure 1, Student (a)'s statement demonstrates a desire to bring advocacy to the impacts of climate change for the future by serving as a catalyst for change. Student voice not only helps to steer teaching curriculum and design, it strengthens teacher-student relationships, and teacher readiness. This also encourages student agency and independence through building self-confidence. A third student gave voice to the impact that has been an issue in their life.

> The issue I want to put into the spotlight is the crazy use of energy that greatly contributes towards climate change. It personally impacts me because if I don't at least try to do anything I will certainly regret it very much when I am living in the future and I personally feel the impacts of climate change.

Another student brought insight about the impacts of climate change as well. It's notable how they give clear personal details about the effects of climate change on their health. The student demonstrates self-advocacy by using their voice to relate and find common themes with others for building relationships and support for their concerns.

> I want to talk about Global Warming and its impact on pollution which directly affects me. I have really bad allergies and bad nosebleeds often. The main reason is because the air isn't clean, and my body doesn't react well to it, so on days where pollution is bad, or the wind is hard, my allergies start, and if I sneeze too much or rub my nose because it's itchy then I get a nosebleed. My nose bleeds tend to be long and won't stop for a while.

Yet another student in a combined 9th -12th grade art class exhibited shy and non-engagement tendencies with larger groups of peers during most class sessions. Then the student was personally prompted verbally within Zoom breakout rooms and with peer support they exhibited more vulnerability and comfort speaking out and sharing with others. In this particular journal entry, the student expressed their voice about how being a woman implies being treated differently and how it impacts their life:

> The change I would like to give a voice is equality so everyone can start being treated the same. This personally impacts me because I don't like seeing other people get treated differently in any kind of way. This issue personally impacts me because I want to be viewed and treated equally with others around me. It should not matter where I'm from, or what my background is, being treated like everyone else is important to understand and something everyone needs to do with other people that don't necessarily look like me.

Due to the consequences of the pandemic some of the students in this study felt unrepresented and that their voices were silenced. Students were challenged with having to learn and adapt to distance learning environments as the primary format to communicate. The students explored how they use art as a vehicle to express their voices and influence change about thinking of their academic future. The following quote follows a question posed to students in a journal entry exercise.

> "My Journey is". Right now I'm thinking about doing art for the next few years and see where that takes me, trying out different activities or just "New" things in general, so I know what I like. I'm interested in health and med so I'm still trying to figure out what my journey is exactly.

Another student explains the impact of art.

> Art helps me feel confident to show or talk about my ideas, thoughts, feelings without being scared or someone judging that or denying, and making fun of me. Also depending on the environment I'm in. Is it somewhere where people usually don't share creativity?

**Engaging Opportunities For Building Relationships Through Peer Interaction**

The second finding illuminated through this research is that by creating engaging opportunities for building relationships through peer interaction, the students stepped up their participation and engaged in the opportunity for social and emotional community building connections with peers. In the beginning of my research, I was unsure how to manage my students and observe their participation in activities. We had been fully engaged in an online learning platform since the beginning of the school year prior to my study. During the first quarter of the school year it became evident that the students were not forming relationships with other peers. They remained silent in most online sessions, not engaging with one another even in breakout rooms. Online learning was not addressing the development of connecting students and forming normal peer relationships. The cohort of students were challenged with many technical issues due to working remotely from different locations.

One of the first things I observed after introducing the assignment for this research project was a deafening silence. It occurred to me that the students were either terrified of verbally engaging in a critique activity with other peers which may leave them feeling vulnerable, or feared failing to conceptualize the value of and how to do the study exercises.

Over time, and as they began to develop their work, I noticed that when students did speak, I began focusing on listening to each student's words and how the intonation of the energy behind their voices impacted their expressions with each other. I was surprised to find the

critique activity was uncovering an unexpected opportunity. This opportunity transformed the quiet into personal engagement and empowerment, further providing students a safe container for which they could engage and express their feelings with their peers. In addition to this surprise, I found that the technology helped to translate this traditionally in-person activity into a seamless online platform for distance learners.

### *Encouraging Self-Directed Learning and Engagement*

Learning that moves from a teacher-centric to a student-centric approach assists students in increasing their engagement and involvement in their learning processes by their investment of time and focus. When students are given choice in subject matter activities group learning is facilitated, and students learn to share and engage with one another. This offers the opportunity for students to take charge of their learning even though they do not have all of the material.

After checking in with all participants and listening in on their conversations and feedback I was delighted to observe the critique interactions were going well. For example, I popped into one room, where student (c) was critiquing student (d)'s poster project, asking the meaning of all the different images represented. Student (c) admitted that they were confused because they thought the assignment was about drawing a poster that addressed one issue. Both students were able to work through the confusion as student (d) explained to student (c) that the singular message was present and then it became clear to student (c). The following is a sample of student (d)'s composition.

*Figure 3 Student (d) Poster Composition*

What I learned from this experience, allowing students agency with peers solves problems more effectively than having an instructor step in. Both students were engaged in a query process that included both verbal and visual language and resulted in successful comprehension of the assignment.

### Partnered Verbal and Written Critiques of Art Representing Student Voice

Similarly, in the effort to address the apprehension and silence common within an online classroom environment and to include all learning styles with equal access to learning opportunities, I implemented a team building activity which paired a set of two students together in a Zoom breakout room to visually and verbally observe and critique each other's completed Impact Project. They were instructed to ask questions and share their observations and feedback to each other based upon a set of written criteria that included the elements and principles of art along with their personal reflections and suggestions. It was not clear that the students would

engage verbally at first, since it had been my experience that they had been reluctant to engage in this way since distance learning began in March 2020. I was excited to see and experience the verbal exchanges that were occurring as I entered each of the participants' Zoom rooms. They were modeling the learned technology while sharing their artwork online and verbally exchanging their observations, questions and responses related to their assignment. Few students exhibited more quiet and generalized participation with written notes and less verbal details being exchanged. In one of the rooms I observed during these exchanges, the student sharing was asked why "Global Warming" impacted them. This question was in response to their journal entry and a result of the peer critique exercise. The student had offered the following:

> The ice is melting worldwide, especially at the earth's poles. This includes mountain glaciers and ice sheets, much of this melting ice contributes to sea-level rise. Global sea levels are rising 0.13 inches and rising temperatures are affecting wildlife and their habitats. Vanishing ice and warmer temperatures cause migration patterns to change and keep many species on the move to find food resulting in life loss.

Based on the experiences of the students, the exercise in art critique demonstrated critical engagement and a sense of community that is possible with art lessons offering opportunities to communicate and form relationships vital to real life experiences.

Student (e) demonstrates how the visual reference of pollution can assist us in understanding the critical interaction involving both visual and written form. The student shows a connection of visual images depicting elements related to cause and effect of pollution and combines these with

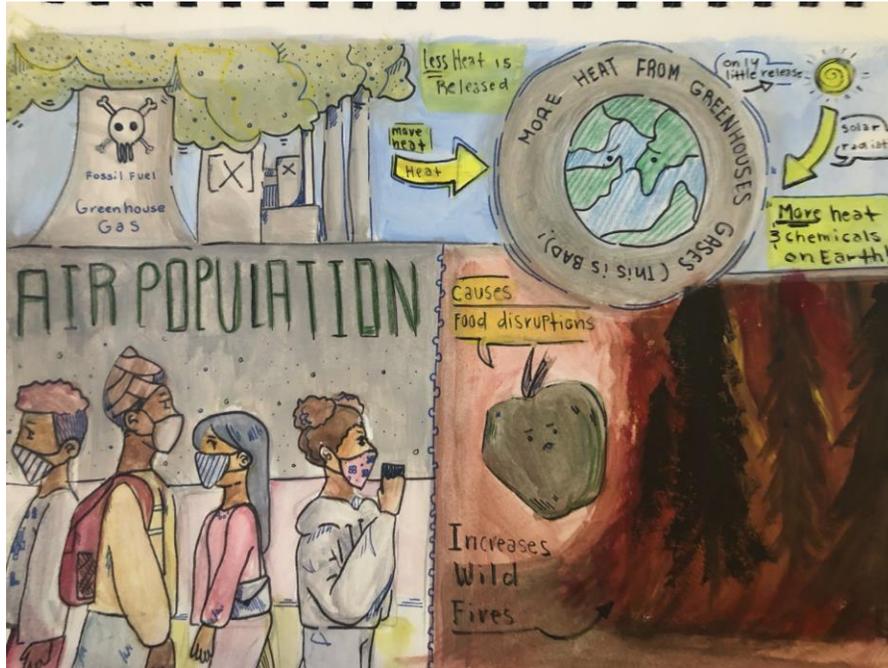textual content that help us understand and impact their message.



*Figure 4 Student (e) Project Critique*

At the end of the peer critique process the students responded with increased feedback through written form whereby they demonstrated more open conversation by answering clarifying questions. It was still noticeable that some of the silent participants remained silent and did not want to share out after the activity. However, understanding the technological and logistical issues that presented challenges for students, the students found it difficult to replicate real life interactions with peers and teachers. A big part of the student experience is collaborating with instructors, peers and participating in school activities and social events. They might not be able to walk into the principal's office as an online student, but the support is still there through technological means. Knowing this can help make all the difference in experiencing art with online learning.

**The Invisible Thread: Skill Building and Interdisciplinary Course Alignment**

During one of the observational feedback interviews with student participants, I learned that several students were engaged in a similar project in another social studies core class, where they were using symbolic images, art elements and materials to create posters to address a global social issue then verbally present through their voice in the form of a peaceful protest representative of this global issue. This example demonstrated how an arts education can connect to other content to build skills and reinforce learning. Arts education can present difficult concepts visually, thus making them easier to understand. These experiences boost critical thinking by teaching students to take the time to carefully observe the world around them, and point to how art can improve many aspects of life.

*Interdisciplinary Instructor Insights*

I was also curious to see how the arts influence students' learning in other classes from the perspective of teachers. So, I invited the choir teacher, who had been an arts instructor in my district for over 28 years, and a math teacher, who had been with the same school district for the past 7 years.

The choir teacher taught music, theater, and choir in middle and high schools during their career. My conversation with this teacher centered around how a visual arts program connects and influences students in other aspects of their high school academic success. According to this teacher, a part of music, for example, has a typical melodic theme.

> I'm referring to the melodic line and how it moves, whether it's smooth or choppy, and how it sounds. I will also discuss textures in the same way as I can discuss that. It has a texture and shape that is both thin and dense, long or short. So, you know, I use all those phrases in musical terms.

The teacher also pointed out that students use pictures and images to stimulate engagement about many issues that are important to them including mental health, the Black Lives Matter movement, and LGBTQ advocacy:

> You'd hear the voices singing, and then you'd see pictures displayed on the topic. The whole show was about using voices for social justice. And so while they were singing about the Black Lives Matter movement, then you would see pictures, images from that, or if they were talking about mental health, or LGBTQ, whatever the images were that would support the text and the lyrics that they were singing.

This teacher also suggests that the graphic arts help choir students by allowing them to create art posters for specific shows, which they then use to advertise activities by digitally circulating to prospective audiences. Prior to the pandemic, the teacher discussed how she used art more in elementary level schools where classes were held in person. Students would draw to music depending on what they were hearing, and articulate how the sound made them feel. In addition as part of this activity the students were asked to draw the shape of a melody, which is used in melodic mapping:

> There are such things as melodic maps that music teachers will use where they've taken a symphony and they've used different symbols and it shows kind of how the music moves and booms, there's this big sound. We can describe music for kids through the enhancement of a visual picture because we are so visual.

Toward the end of the interview the teacher revealed the overwhelming demands of distance learning and the impacts it had on her as well as her students. "It takes the whole class time just trying to get them engaged in their learning." I recognized her distress, and I was particularly moved to hear how energized the teacher's voice became when telling me about her own

experiences as she pushed to keep arts education alive in the hearts and minds of her students.

In terms of how the arts lead to teacher learning, I discovered that many of the core values were being illustrated in this case by using student speech and decisions relating to vocabulary, kinesthetic abilities, and technology in art. It is important to note that many of the skills learned during the pandemic due to distance learning placed many obstacles and enormous pressure on students to self-advocate and teach themselves how to navigate unchartered territory when it comes to learning and technology. This has been a teaching moment for both teachers, administrators, resulting in the development of a wider range of intellectual competencies used in other educational courses.

The math teacher explains how art and math crosses paths in student learning. Math aptitude requires students to organize and comprehend an abundant of data to understand and make connections that define the whole picture or story:

> I think the visual arts are very detail oriented. And you have to look at the particulars. Whenever you're in any discipline. So, I especially use this in stats class. We look at data and lots and lots of data, but we sort of use this data to tell us a story, or rather paint a picture, to paint a picture of us. So, yeah, look at the details and see how those details come together, so we can see the whole bigger picture of everything. That's why I think there's a commonality between math like, you look at art. Yeah, you have little strokes, you have little paints but bring that all together, you'll get a really good, really good art.

Through mathematical concepts borrowed in visual arts, students can cross connect with both math and art curriculum to become part of a wider body of knowledge imparted by other students creating an environment that promotes higher order thinking.

I think art really makes you like art forces you to sort of think outside the box. And you,

you definitely need that in statistics like you need to sort of think of different avenues of how to get to a certain conclusion, right, if you're only like a one track mind that there's this clear cut, cookie. Cookie Cutter standard of how to get to the answer that's you're going to fail in math. So what I think art does is sort of broadens your perspective to see different avenues of getting to that answer.

**Conclusion**

In conclusion, the evidence presented in this research aimed to investigate how the arts can be used to help students of all backgrounds, language abilities, and learning levels in gaining access to and improving their aptitude for learning in all subjects and disciplines. The students who participated in this study were given a set of problems in the form of art assignments that allowed them to explore a deeper level of self-advocacy. Suraco (2006), asserts when students have an active voice in their learning, the role of the teacher is transformed. By engaging students in dialogue, letting the conversation evolve and permitting students to do their own research removes the teacher from the center of delivering content as they develop a sense of confidence and community

Since visual art experiences speak to multiple learning styles, art education accommodates greater student participation. As a result, learning is improved, and students learn to collaborate and participate within a larger group of people. Learning should be meaningful, and subjects should not be isolated. Students can assimilate knowledge in a variety of ways when educators share their ideas. On the internet, Suraco (2006) points out several examples of interdisciplinary and integrated lessons, such as Science and Art, Leonardo Da Vinci; The Great Pyramids, golden ratio, art, design, and math; and M.C. Escher and math tessellations that illustrate the connections between art, science and math.

This study has shown that when students have the opportunity to be heard they feel validated in their efforts to establish importance which in turn improves their motivation and academic progress. The participants revealed in their art projects, exemplified by "The Cannonball", a deeper understanding for connecting contextual language with visual symbols as a form of communication. This is strongly shown in student drawing samples of journal entry tasks, which demonstrated how the experience of the participants' representation is distinct, including individual challenges and techniques. It is important to note that the students exhibited a powerful demonstration in building relationships with each other through verbal exchanges that provided important details and feedback about their work. In their breakout spaces, they also shared many significant art characteristics, such as balance, composition, tonality of message, value, and color theory. Some students said they felt productive and that the peer observation feedback gave them a sense of achievement. This demonstrates the feeling of validation and community that is possible with art lessons offering peer-to-peer engagement to form relationships vital to real life experiences. It also provided an excellent opportunity for group development and social validation.

The invisible thread is the link that connects art education across all subjects. Leading to a path that improves kinesthetic ability through the use of physical materials and resources. Student examples and teacher interviews are further confirmation of growth in both analytical and imaginative thought, and thereby helping to inspire and further develop their lifelong learning skills. Cross curricular development and collaboration binds the thread through these shared connections. Evidence was explored through the interview with the choir and math instructors. These interviews helped establish new information that further made connections beyond common art elements. The resources and language used in art education has proven to be

beneficial in collaborative work across all curriculums.

**Chapter 5: Discussions**

This study sought to explore the impacts of students' academic experiences in an art education class environment during a pandemic as well as their responses to sharing the unique samples of their artwork and feedback with peers. The findings indicated that peer engagement increases opportunities for development of relational experiences and self-advocacy when students' voices are given an opportunity to be expressed. Students' individual learning styles vary according to specific characteristics that define how a student organizes thoughts and communicates information (Dunn & Dunn, 1992). University of Illinois Springfield (2018), have shown that delivering new material through multiple modalities, which align with these characteristics, optimizes learning experiences. An invisible thread was also identified, indicating that arts education can serve as a gateway to cross-curricular learning though lesson design and alignment with other course subject matter.

Previous research has shown that students have shown advances in academic performance in many subject areas of education because of the investment of art education (Smith, 2009), and art education benefits students by acquiring common language and literacy skills that promote participation and motivation, adding a sense of belonging while inspiring collaboration that cultivates intuition, reasoning, imagination and dexterity, preparing them for life beyond secondary education (Smith, 2009). Similar to (Dunn & Dunn, 2006) this research found that visual learners tend to organize and express their thoughts using pictures, graphs, and photographs. This research implied that an arts education can provide students the means to expand and refine their metacognition and development of their conceptual skills (Marshall & D'Adamo, 2018). This was evident through shared activities such as a peer critique which allowed students to interpret and decipher things through their own experiences. What was

unique was how the students interacted with each other, allowing each other to take all of the visual information in, and then be able to express themselves, and reflect on their own lives and culture.

Online technology has provided efficiencies in areas such as delivery of coursework and assessment of student learning, however there are still many obstacles and improvements in applying this practice relating to art education and pedagogy. The need for comprehensive instructional technology and training for both teacher and students remains reliant on self-advocacy and discovery (Warner et al, 2008).

This study discovered that, since the advent of online learning, technology integration has mostly focused on general teacher training as professional development. However, additional understanding of current technology usage in art education would go a long way toward better preparing potential art teachers (Strycker, 2020).

The research is unique due to the fact it was conducted during a pandemic in which all classes were in distance learning and builds upon the work of Csapo and Haven (2006) by exploring a comprehensive and immersive online learning experience centered in art education and its cross-curricular connections. During a pandemic, it was discovered that most participants could still effectively express themselves while participating in distance learning, thanks to an art activity that allowed students to verbally exchange their thoughts and inquiries. The peer critique initiated a learning experience that transformed the silence into an engaging visual language dialog.

Using strategies like journal entries gave students the choice to explore topics that matter to them. The journaling activity produced unique expressions that reflected students' individual voices using common symbolic language of visual imagery to communicate their message. As a

result, this exercise empowered students with a sense of self-confidence demonstrating their ability to communicate differently, finding a path to self-advocacy and equity.

**Implications for the Literature**

In the findings, the research highlights the value of an arts education and the importance of student voice helping to steer a path that creates a learning environment where visual art skills can bridge gaps in academic curriculum for different learning styles and student experiences. The implications of these findings affirm Dunn and Dunn's (1992) findings that students learn more effectively from being able to express their ideas and feelings with visual imagery than exclusively with written text. The focus group critiques and journal entries provided important data and insight illustrating how art education in particular provides a kinesthetic path for communication and equity among students with different learning styles (Dunn & Dunn, 1992). Bruff (2011) implies for students to achieve maximum learning ability, each learning style is complemented by certain characteristics, and new content is better learned when it is reviewed several times and across multiple modalities. The insights from the teacher interviews also illuminated how art contributes to the bigger picture for integrating cross-curricular development that recognizes and values art as a strong contender for all academic learning.

**Implications for Practice and Policy**

*Practice*

The findings in this research point out the importance of students having the opportunity to be collaborative partners in their art education and learning experiences by expressing their ideas and feelings. Students need the opportunity to advocate for themselves and collaborate about how they best can learn educational subject material. Using strategies like journal entries that situate the students in exploring topics that matter to them, allow them to produce unique

self-expressive reflections, modeled by the student Figure 1: Student (a). Peer critique methods also contributed to an increase in comprehension and student advocacy across disciplines and would be a positive direction for adapting new practice and policy that values student learning. The findings of this research emphasize the importance of embracing all learning styles by providing activities that speak to common language acquisition which are used in art classes, such as symbols, shape, form and space that visually represent words to communicate. This practice would help to bridge the gap between different learning styles and imply increased comprehension and equity learning for students.

*Policy*

The findings of this research suggest that having a school policy where teachers align class subject matter curriculum with art education across all disciplines provides students reinforcement of learning material that is relevant to their course subject matter and allows for greater equity among different learning styles. Supporting student learning through integration of cross-curricular instruction invites learning in a number of ways, it promotes collaboration, new discoveries, increased motivation, and a better understanding of how students learn.

A strategy that combines art practice and student voice will aid in the development of a stronger link for creative ideas, and instructional practice through the educational experiences of students and teachers.

The combined interdisciplinary approach to learning, student interest focused research and providing creative access to all learning styles also creates the conditions from many different demographic communities and experiences to engage with learning in authentic and meaningful ways for them.

**Limitations of the Study and Future Research**

There were several limitations to this study. First, there were only sixteen students of mixed grade levels from two different schools in the same district, and two adult educators who participated in this research. The sample of research information was limited due to the pandemic and distance learning environment. Another limitation was a short time frame for research resulting in one project demonstrating only qualitative data.

*Future Research*

To enrich and diversify the viewpoints and data of future studies, it would be beneficial to maximize the number of students and educators who participate. Furthermore, expanding the study by giving more time to complete additional art projects and using mixed approaches to measure data from many locations in Northern California will broaden the quest for new data discovery. Another consideration would be to increase students' exposure to outside art exhibits that feature a range of social and political art that inspire reflection, peer engagement and follow through kinesthetic exploration of techniques discovered.

I would design a project experience that takes a more global perspective and connects students with art students from abroad through online format. This would offer students an opportunity to learn about cultural divides, economic and political influences, the importance of art, and the perceptions of art education from people outside of the United States.

**Conclusion**

This study illuminated the importance of art education as an integrative pedagogical approach for student learning. Student voice can be a powerful tool to help bring awareness to the benefits of art across academic curriculums. Combining the arts and technology can result in novel and exciting ways to keep students inspired and interested in their learning and the world

around them. By considering individual learning styles teachers can develop curricula activities that help students build self-confidence and develop vital relationships by sharing and exploring their ideas and feelings, as well as discussing challenges and personal reflections.

We need not continue the same conversations about the value of arts education, but recognize the student's voice can be a collaborative advocate for facilitating change in the way we approach the value of arts education standards.

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## Appendix A: Visual Impact Project Questionnaire

Answer all question and turn in by Tuesday, January 26, 2021

**Name**

**Period:**

**Choose your area of focus for this global/local issue**

- Global warming

- Social/Economic

- Human Rights

- Equality

- Political Rights

- Social Justice

**What is the issue/change you would like to give a voice and how does this issue personally impact you? Be specific and explain.**

**Appendix B: Journal Entry Assignment**

A. **FIVE REFLECTION QUESTIONS:** Select 5 questions from the list below

   **(Don't forget to title and Date all entries)**

B. **IN YOUR JOURNAL/SKETCHBOOK WRITE AND DRAW THE ANSWER TO (5) OF THE FOLLOWING QUESTIONS** (The answers must relate to your chosen IMPACT ISSUE)

C. **TAKE A PHOTO OF YOUR WORK AND TURN IN BY DUE DATE**

   Be sure to research the facts before stating a position for or against a question.

   1. **What are some other questions that come to mind? (about your Issue)**

   2. **Why do you feel the way you do? (about your Issue)**

   3. **What are your arguments for or against? (about your Issue)**

   4. **What – or who – has influenced your decisions.**

   5. **What is the "flip side" of your issue?**

   6. **What might the other side have to say? (about your Issue)**

   7. **Can you see their point of view?**

   8. **What is your reasoning for choosing your stand?**

   9. **Is your artwork intended to offend?**

   10. **Who would be offended?**

   11. **Does the artist have a right to offend?**

   12. **Critique your project issue- Does it get your point across?**

   13. **How? Is there a focal point (center of interest)?**

   14. **Does it show effective use of Principles of Design? How?**

**Appendix C: Visual Impact Student Exit Survey**

Write in complete sentences and answer all questions fully with correct spelling (no acronyms).

1. **Name: (First & Last)**

2. **Period:**

3. **What are some global issues in 2021 that concern me? Why? (explain)**

4. **What aspect of this global issue impacts me and my education?**

5. **In what ways can I help to bring awareness to my concern?**

6. **How can art impact societal awareness?**

7. **In what ways have artists changed my thinking about art?**

8. **Describe one way in which your thoughts influence your academic success?**

**Appendix D: Teacher interview Questions**

1. Do you use art/skills in your class? If so, can you describe how?

2. What commonalities do you observe in your curriculum and the visual arts?

3. Do you think art contributes to your class learning environment? How? If not, why?

4. What is the significance or value of art to you?

5. Can arts education improve the school climate? If so, How?

6. Findings provide strong evidence that arts educational experiences can produce significant positive impacts on academic and social development. If so, what do you think those impacts are?