

The Relationship Between Students' Performance in Art  
and Their Off -Task Behavior in ELA Class

Courtney Collins

Milligan College

Spring 2017

### **Abstract**

The purpose of this study was to examine the relationship between students' performance in art and their behavior in regular classrooms. The sample consisted of 4<sup>th</sup> graders in an art club. Data were collected using teacher made tests and tallying of off-task behavior in a regular classroom. The students were taught art once a week for 10 weeks. The topics covered reviewed arts' impact on thinking, cognition, neuroscience, society and culture, visual literacy, and behavior. The students' off-task behaviors were tallied after students returned to regular classrooms and participated in normal academic activities. Data were analyzed using a Pearson Product Moment Correlation test. The results indicated a significant relationship between art and classroom behavior. There was also a significant relationship between media and art. The results suggest that art plays a major role in improving students' off-task behavior.

*Keywords:* art, aesthetics, on and off task behavior, visual literacy



## Institutional Review Board Decision Tree

Based on your responses, you do not need approval from the IRB.

It looks like your study is exempt because it does not meet the definition of a research activity. Therefore, it does not require approval by the IRB. However, you should follow ethical practices even when just practicing or demonstrating research.



[Refer to 45 CFR 46.102\(d\)](#)

Student researchers may benefit from going through the IRB process even if they are only collecting data to learn techniques.

[Return to Beginning](#)

## Table of Contents

	Page
Abstract.....	2
IRB	
Chapter	
1. Introduction.....	4
Statement of the Problem.....	5
Purpose of the Study.....	5
Significance of the Study.....	5
Limitations.....	6
Definitions of Terms.....	6
Overview of the Study.....	6
2. Review of the Literature.....	7
3. Methodology and Procedures.....	22
Population.....	22
Sample.....	22
Data Collection Instruments.....	22
Procedures.....	23
Research Questions and Related Hypotheses.....	24
4. Data Analysis.....	25
Collection of Data.....	25
Research Question.....	26
5. Findings, Recommendations, and Implications.....	27
Summary of Findings.....	27
Conclusions.....	28
Recommendations.....	28
Implications.....	29
References.....	30

## **Chapter 1**

### **Introduction**

Creating art is a form of visual communication. Being visually literate is beneficial to individuals living in our modern society. The process of art-making can provide individuals with a sense of accomplishment and self-confidence. A strong identity of self is important in life. Art teaches and encourages people to deal with difficult situations appropriately, and constructing art aides in helping individuals become independent thinkers in decision making. An art-friendly and enthusiastic community produces a healthy economy.

Art is viewed by many as a means of expression, no matter the media used. The individual making art, at any age or level, releases emotions, and creativity. This unveiling and release of emotions enhances overall health and well-being, and accomplishment. This discovery of accomplishment, allows for feelings of self-worth and self-confidence. “The child who uses creative activity as an emotional outlet will gain freedom and flexibility as a result of the release of unnecessary tensions,” (Eisner, 2002, p.19).

The process of art-making helps to organize thoughts and feelings into a physical work or piece that can be viewed by others. The artist exercises creativity, imagination, and innovation into a project. Viewers’ opinion of the work(s) may vary in perception. Nonetheless, it speaks to all who encounter the artwork (Malchiodi, 2005). This unique form of communication can be effective in uncovering hidden scars, pain, sufferings, and wounds in ones’ life. The potential of this form of communication is endless in the connections made and has no boundaries of intellectual capacity. Art inspiration and innovation influence students’ lives in ways that traditional therapies may be unsuccessful in accomplishing. More artistic experiences can lead to better coping skills.

Artistic expression embraces and catches areas of our lives that are “off limits.” Often these happenings have been blocked out or set aside in ones’ thought processes and

have not yet been dealt with in an effective or healthy manner. “The inhibited and restricted child, accustomed to imitating rather than expressing himself creatively, will prefer to go along with set patterns in life,” (Eisner, 2002, p.32). Art allows for events to be dealt with and reinforces self-esteem, pride, and dignity (Malchiodi, 2005). If a child is capable of gripping a crayon, or smearing paint, art can be made. The use of art by students with learning disabilities, like attention deficit hyperactive disorders or other behavioral/emotional problems, art can be an effective tool of value to uncover learning possibilities with a child (Kahn, 1999).

Identity is the way in which we perceive and express ourselves. Things that make up identity include: community, culture, heritage, body image, and gender. The process of having and finding identity can be creative or destructive. Experience with age changes how we view ourselves and others. Identity influences the decisions we make. Artists use their work to explore and question exactly what identity means.

Art education impacts state economies. The arts stimulate local economies by creating jobs, attracting investments, supplementing tourism, and generating tax revenues. The arts improve the quality of life for an area’s citizens by supporting community development. A creative economy has consumer products, imaginative insight in industries, healthy areas of manufacturing, technology jobs-such as graphic design and animation, impacts agriculture in ways of gardening and landscaping, and tourism.

Making art allows one to become visually literate. Artistic self-expression not only gives one a sense of accomplishment and allows them to learn more about identity, but teaches them tolerance, problem solving, and perseverance. The arts permit for a community’s economy to be productive.

### **Statement of the problem**

“Since it is generally accepted that progress, success, and happiness in life depend upon the ability to adjust to new situations, the importance of art education for personality growth and development can easily be recognized,” (Eisner, 2002, p. 12). Research has been overlooked by some that suggests a link between art, behavior, and academic performance. Educators may find it useful to familiarize themselves with children’s artistic interests as it relates to behavior and performance in the regular classroom. Therefore, the problem of this study was to determine what the effects art has on children’s behavior.

### **Purpose of the study**

The purpose of this study was to examine the relationship between students’ performance in art and behavior in the regular classroom. The reason for this study was to evaluate children’s classroom behavior, interaction, and collaboration between the regular classroom and the art classroom. Was there a difference in children’s classroom performance as a result of the art room experience?

### **Significance of the study**

Art continues to make a difference in the lives of so many. Throughout history, art has had significance, and has maintained importance today. Either way, art is significant in our world and society, not only in self, but in academics, culture, behavior, economic contribution, and progress.

### **Limitations**

The following limitations were encountered in this study:

1. The sample was not randomly selected and therefore this study was open to all fourth and seventh grade students only, and not the other grade levels.
2. The instruments for this study were not tested for reliability and validity.

### **Definitions**

For the purposes of this study, the following terms are defined as:

Academic performance: the outcome of an educational experience- the extent to which a person has achieved their educational goals.

Art: the application of an individual's creative skill and imagination, in a visual form, to produce work(s) to be appreciated for their significance in emotion captured and/or beauty.

Behavior: the way an individual acts, or conducts oneself.

On task behavior: A child's response to task-based assignment. This term describes how the child performs their tasks. On-task behavior characterizes a child's ability to be oriented on-task performance.

### **Overview**

This study contains five chapters. Chapter one includes: an introduction of the study, a statement of the problem, a statement of the purpose, significance, limitations, definitions of terms, and an overview of the study. Chapter two presents a review of the literature relevant to the topic of study. The research question and methodology of how information was obtained is described in chapter three. Chapter four reports the findings of the study. Chapter five states a review of the study, research questions and methods, a summary of the findings, conclusions drawn from the findings, and a discussion for future study.

## Chapter 2

### Literature Review

First, it is necessary that definitions of art, beauty, and aesthetics be established to understand the context of this paper. Art can be defined as an expression of our aesthetic response to beauty. Beauty is a combination of qualities (like shape, color, and/or form) that please the senses- especially sight. Aesthetics is a philosophy or a set of principles concerned with the appreciation and nature of beauty. These elements are combined to enhance personal expression.

However, it is extremely difficult to define art in one sentence. Socrates asked, “Which is the art of painting designed to be- an imitation of things as they are, or as they appear- of appearance or reality?” Plato claimed that art “was the imitation of nature.” Art is what makes us human. Art is a form of communication with other humans, an implementation of the imagination, an application of skill, it can be political, and/ or autobiographical. Marcel Duchamp said that art was “a habit forming drug.” Georgia O’Keefe described art as “filling a space in a beautiful way.” Georges Seurat simply stated, “art is harmony.” Paul Klee said, “art does not reproduce the visible, but rather makes the visible, visible.” According to Frank Lloyd Wright, “Art is a discovery and development of elementary principles of nature into beautiful forms suitable for human use.” Henri Matisse indicated, “What I dream of is an art of balance, of purity and serenity, devoid of troubling or depressing subject matter, an art which could be for every worker, for the businessman as well as the man of letters, for example, a soothing, calming influence on the mind, something like a good armchair which provides relaxation from fatigue- a source of calm in the world.” And finally, Oscar Wilde explained that, “Art is the most intense mode of individualism that the world has known.” Making art is a type of visual communication that allows for a kind of sensitivity and awareness of one’s surroundings and for other individuals to be reached.

Now that the potential of what art means is established, one cognitive function the arts perform is to help us learn to notice the world in ways that are more than surface viewing. This cognitive perception involves ones' conscious intellectual ability to evaluate, think, and reason the observed demonstration of teaching as it relates to the art assignment. The arts are willing to go beyond the surface realm and entertain perception of the world at a level depicted from individual talents, abilities, learning skills, and demonstration. The arts provide a new way of seeing. The arts help us discover the contours of our emotional selves. This new found discovery is welcomed, challenging, and enlightening to individuals. Through the arts we learn to see what we had not noticed, to feel what we had not felt, and to employ forms of thinking that are indigenous to the arts (Eisner, 2002).

### **Art and Thinking**

Art concepts are ideas one projects in the form of images, or mixture of forms combining all their aspects to produce particulars of an experience. The concept can be demonstrated mentally or physically. In other words, we can imagine possibilities that we have never encountered and try to create them in imagery for others, attempting to share that idea. Another method is to create new concepts from an occurrence that we are familiar with and have experienced, making the private public in our consciousness with others. Either way art concepts are birthed, combining all aspects of inspiration and resourcefulness representing the experience (Eisner, 2002).

Art is crucial to childhood development. Simple activities such as scribbling with crayons, holding paintbrushes, or drawing a circle can aide in developing motor skills. Children should be able to cut straight lines with scissors and draw a square at age four (Lynch, 2012). Using scissors benefits dexterity when writing. Children can learn descriptive words, how to talk about feelings, symbolism, colors, shapes, and actions. The art-making process assists in

critical thinking, problem solving, and making choices. Drawing and sculpting can allow a child's inventiveness to grow, and help with visual spatial skills (Lynch, 2012). Art classes encourage cultural awareness by helping students in better understanding theories and decisions people make.

Creating art allows different parts of the brain to interact with one another. Our brains use memory, emotion, and other sensory impressions of color as well as texture to evaluate works of art. Art production uses all parts of the brain, with a combination of motor and cognitive processing. Individual brains develop patterns and preferences with more exposure to art, this method also determines the choices we make in the designs we prefer and whom we find attractive. This thinking procedure also helps with abstract communication responses in math and music (Hotz, 2015).

Critical thinking is an organized, cognitive, and active process. Critical thinking uses logic and reasoning in problem solving. This act supports higher learning by allowing people to make connections between concepts, and by being able to make generalizations with connections between disciplines. Students in the arts are capable of developing an opinion and being able to support it. Students may be inspired by a work of art and can re-work that inspiration into their own interpretation. This type of thinking supports individuality and risk-taking. In the classroom, we use Bloom's Taxonomy to ask questions and plan lessons. The taxonomy has been edited over the years since its author first published it in the year of 1956. The original taxonomy read: evaluation, synthesis, analysis, application, comprehension, and knowledge. The goal is to reach the level of "knowledge" with this format. A more recent approach reads: remembering, understanding, applying, analyzing, evaluating, and creating. With the desired outcome being able to create something from the knowledge that has been acquired from the material taught. Critical thinkers have the ability to make observations and draw conclusions.

Teaching art education to elementary students may be important and necessary for a

complete education. It has been proven that children who were involved with varied arts (not just visual art, but music, dance, and theater) experiences over periods of time were found to be more confident and willing to take risks, exert ownership over and pride in their work, and show compassion toward other classmates, families, and communities. It was found that students in art-rich schools tended to enjoy sharing their learning with others and had a higher academic performance than children whose art had been irregular (Child Development Institute, 2010). Generally, it is said that girls mature faster than boys. This means girls' brains develop earlier than boys, resulting in better language and communication skills. Boys learn best with movement and images, because their minds are dedicated to mechanical and spatial functioning. Most children are visual learners. Boys can absorb more details about a subject if they are allowed to draw a picture before they write (Benaroch, 2011).

Art education is vital to child development. Art activities enable both sides of the brain to join forces. Engagement in art classes encourages critical thinking. Students involved in art undertakings are more inventive, willing to take risks, and well- rounded than their peers. Generally, students that have a background in the arts behave better in non-arts courses than their peers.

### **Art and Cognitive Skills**

Artists have historically been investigators of perception. Art contains knowledge about the brain that no one holds a better key to unlocking than the artist, themselves. Art and its appreciation allow for a deeper understanding of reality. Art's appeal to the senses is at times, characterized as a spiritual experience to some individuals. Sound art explores the marriage of the arts by utilizing 'sound' as a canvas. Art exists because of human beings, without an audience, works of art have no purpose.

We live in a society that often does not recognize artists and the arts as a staple that is

essential or vital for livelihood. If art were acknowledged as a principal ingredient for unlocking the mysteries of a dimension of depth as seen through the eyes of neuroscience, and integrating these perspectives it seems that we would arrive at a deeper understanding of reality. An appreciation would generate with this deeper understanding of reality (Baker, 2013). “We develop, in part, by responding to contributions to others, and in turn we provide others with material to which they respond,” he reasons that communication in a classroom provides the opportunity for the growth of culture (Baker, 2013, p. 5).

In a study, MRI scans were conducted by Semir Zeki of a portrait artist and a psychology student of which had no formal art training, and were assigned to make 30 second drawings of faces while inside the machine. The results were that the area of the brain where face identification is associated was specifically activated, and that the artist “may be more efficient in processing facial features.” The student also showed less activity in the part of the brain that associates face identification, and “greater activity in the middle frontal area, part of the brain usually associated with more complex associations and manipulations of visual forms, suggesting a, “higher order interpretation,” (Huang, 2009, p. 25).

“Art and cognition have always stood as two convex mirrors each reflecting and amplifying the other,” (Huang, 2009). The connection between cognition and aesthetics has not been studied persistently, in spite of current developments. Art is an equal to scientific methods of expressing and understanding our world, making it a matchless resource. Art addresses us in the fullness of our being—simultaneously speaking to our intellect, emotions, imagination, memory, and physical senses,” (Huang, 2009, p. 26).

John Dewey stated that, “the aesthetic is the intrinsic quality for reasoning and experience in human beings. However, only given the right conditions and opportunities can aesthetic encounters remain accessible to everyone. If children are not given the opportunity for aesthetic experiences, development may be severely hampered in areas of reasoning and visual literacy.

Communication in a classroom can provide for the opportunity for the growth of culture. Often the focus on art is the visual appeal or the aesthetic feature or characteristic depicted from one's prior experiences, feelings, intuition, and creative or resourceful background. It is this analysis or review that synchronizes problem solving in all realms.

Visual literacy is the ability to interpret, and/or decipher information presented in the form of images. The saying, "A picture is worth a thousand words," is generally proven to be true in our image-saturated society. When learning language, children learn to read images before words. There is definitely an alphabet, vocabulary, and grammar to seeing. About 90% of the information we take in from the world is visually consumed. Visual literacy is a form of critical thinking that enriches ones intellectual capacity by utilizing artistic skills.

Being able to read pictures may give people an advantage in work, and life in general. It is suggested that this increasingly visual world is the focus of the visual culture approach to education and that "to succeed in contemporary culture, people must be able to 'read' this constructed environment, interpret it, and use the visual signs they find in it," (Collins, 2014, p. 2). Teaching visual culture in art education to elementary students may be important and necessary for a complete education.

Art consists of not only the ability to perceive things, but to recognize and realize things. Ones' senses of seeing, touching, hearing, tasting, and smelling offer us to attend to the qualities experienced in the sensibility and perception of the art piece encounter. The cognition or mental process is critically important in forming the understanding through thought and senses. The occurrence is conscious and unconscious, concrete and abstract. The development occurs from different perspectives, depending upon the person, context, approaches, and collaboration of the end result and opinion.

Sound art is an abstract art form that cannot be physically touched or felt. Music and sound directly engage one's emotions. Sound art often is the act of recreating sounds during a

performance or installation. Hearing a sound can trigger memories and/or emotions. Sound art stretches the boundaries of visual art, conceptual art, and experimental music. Sound art is often a topic of debate because it falls under so many categories of art.

Art may be viewed by some as a spiritual experience. Viewing works by some artists has been known to bring some viewers to tears and the impact is often unexplainable. Art can be regarded as a form of reality by allowing individuals to discover different kinds of “knowing.” Making art is what makes us human. An artwork thrives on people viewing it and appreciating it.

Artists experiment with their audiences’ opinions and discernments. Art is very subjective. Mark Rothko said that, “While the authority of the doctor or plumber is never questioned, everyone deems himself a good judge and an adequate arbiter of what a work of art should be and how it should be done.” Also pertaining to the matter of art being individual, Rothko stated, “In matters of art, our society has substituted taste for truth, which she finds more amusing and less of a responsibility, and changes her tastes as frequently as she changes her hats and shoes.” Studies have shown that artists use other parts of their brains than non-artists when completing constructive tasks.

### **Art and Neuroscience**

Western culture characterizes art as subjective, narrative, imaginative, and is often questioned, but rarely thought of as scientific. Science is portrayed as objective, factual, logical, and essential to our understanding of nature. The growing insight some scientists have developed in recognizing artists’ work as “co investigators” of reality have led them to believe that while approaches vary, both strive toward a common goal of a quest for knowledge (Huang, 2009, p. 24).

The optic nerve contains over 1 million nerve fibers. About 30% of our brains cortex is devoted to visual processing. There are two types of photoreceptor cells in our retinas: cones and

rods. Cones allow us to see color, and work best in areas with light. The cones in our eyes register as red, blue, and green. Rods work best in areas of low light and are responsible for our seeing of values of objects. Luminance is the amount of light that passes through an area. By experimenting with the levels of light in a painting or other work, artists achieve depth- meaning that they make a flat or two-dimensional object appear three-dimensional (Landau, 2012).

Art is very subjective; individual tastes vary, but all of our brains seem to respond strongly to artistic representations of nature. Our environments are not comprised of flat lines, yet we recognize line drawings. An example of line drawings would be those images depicted by the ancient Egyptians. Line drawings use the same neural processes that are applied to see the edges of objects and shadows. Human brains enjoy pattern. Our brains especially enjoy seeing faces, and will pick out images of faces in art. Infants can recognize line drawings of faces. Perhaps this has to do with human evolution and the need for children to recognize their parents or shapes of threats in order to survive. An example of just how much our brains like faces is the smiley face, or how our minds want to see meanings in impressionist and abstract paintings.

In the 1960's, Op Art (Optical Art) was an example of experimentation with these scientific concepts. Op Art focused on exploring the effects colors, color relationships, and contrast had on retinas. Artists like Victor Vasarely, Peter Sedgley, and Bridget Riley enjoyed using optical illusions in their work.

Some of the many neurologic rules artists use in their works include, but are not limited to: the Peak Shift Principle, isolation of a single visual cue, problem solving, viewpoints, metaphor, perceptual grouping, and perceptual binding. The Peak Shift Principle implies that exaggerated elements are appealing (like shapes, forms, and colors). The isolation of a single visual cue helps to focus a viewer's attention to a significant focal point. Problem solving applied to the subject matter of a piece- not necessarily the media used to produce the work, normally involves the work telling a story or describing a situation in some fashion. Artists will use unique

viewpoints to add emphasis or drama to a subject. Metaphors are used visually to enhance artwork. Perceptual grouping experiments with the spacing of objects to achieve a desired effect. Perceptual binding toys with the fact that our brains adore pattern, and will pick out patterns, or sometimes make them appear when one does not exist (Zeki, 1999).

To break rules of perception (as most artists enjoy experimenting with), one must first be familiar with the concepts. Artists are like neuroscientists in that they are interested in neurologic rules, and investigate and explore these rules. Art has to obey the laws of vision with the brain, and at times makes them evident in a surprising way. Paul Klee explained that, “Art does not represent the visual world, it makes things visible.” Depth perception and sensation is the visual ability to see or view an object. The distance from one object to another, comparison of objects, the eyes receipt of sensory information in three dimensions from both eyes and sensory information processed mentally, dimensions observed, and calculation are subjective and unique for discernment. As persons, artists’, memory of this perception is actively displayed in images that they view as true and whose memory of images are accurate and articulated (Huang, 2009, p. 24).

Harvard psychologist Patrick Cavanagh has called artists “neuroscientists” in their understanding that “our visual brain uses a simpler, reduced physics to understand the world,” (as cited by Huang, 2009). He reasons that artists then incorporate these shortcuts onto the canvas through shadows, colors, reflections, and contour, which typically go unnoticed by the viewer. Cavanagh thinks that, “the artist is in a sense, a neuroscientist, exploring the potentials and capacities of the brain, though with different tools. How such creations can arouse aesthetic experiences can only be fully understood in neural terms. Such an understanding is now well within our reach,” (Huang, 2009).

A study was conducted in 2013 for the Journal of Neurotherapy to investigate the differences in alpha power between multichannel EEG signals of artists and non-artists. The

researchers compared the levels during visual perception, mental imagery, and at-rest conditions. Electroencephalography or EEG, measures activity in brain waves. The method involves placing electrodes around the scalp. EEG measures ionic current fluctuations within neurons (Nasrin, 2013).

The study determined there was no significant difference between participants at rest. Lower levels of alpha power were found in artists during mental imagery and visual perception tests. This evidence suggests that artists consider more features when viewing artworks. Variation in patterns were different between artists and non-artists. They use different parts of their brains when viewing material (Nasrin, 2013).

Both scientists and artists are constantly in search of knowledge. Artists have to respect neurologic rules when manipulating or using them, because it is how we see. Art is individual, in that our opinions differ on what art is, and what exactly makes art good.

### **Art and Behavior**

Children can learn and achieve through art. Art can improve a child's self-esteem. More art-making opportunities may result in fewer behavior problems, less depression, emotional problems, conduct outbursts, and hyperactivity. Art may also give students confidence in school and daily living. Art can improve a child's social behavior (Reuters, 2015). The arts shape our world. Music videos decide what fashions we wear. Video games desensitize children and glorify violence. Art can have a negative or positive effect on a society depending upon what its citizens listen to, look at, and watch.

When discussing the human brain we typically divide it in halves- the left and the right. The left side is normally dedicated to math, reading, and science. The right side is associated with creativity and emotional perception. Both sides need to grow and work together for a brain to work efficiently. Exposure to the arts strengthens both sides. The arts teach: perseverance,

focus, how to receive constructive feedback, how to communicate effectively, accountability, dedication, how to approach tasks with an open mind, social tolerance, how to appreciate multiple points of view, confidence, empathy, cultural appreciation, playing can be learning, and the fact that there can be more than one correct answer at times.

In a study conducted by Shirley Brice Heath of Stanford University, it was found that kids who were part of non-school arts-based programs in under resourced communities, compared to a national sample of students were: likely to score higher on the SAT if they had been involved for more than four years in after school arts study. Children were eight times more likely to receive a community service award. Kids were four times more likely to participate in math or science fair. Additionally, learners were three times more likely to win a school attendance award, and four times more likely to win an academic award, like honor roll (Child Development Institute, 2010).

When referring to the arts, one does not always think of the visual arts first, but at times of music. Music profoundly impacts and shapes cultures with its influence. One instance comes to mind of music's power, the shooting at Columbine in 1999. There was an uproar because the two students who were guilty of the tragedy explained that they were fans of Marilyn Manson and listened to his music to get energized before the rampage. When questioned about the shooting, Manson explained: "I definitely understand why they would pick me. Because they think it's easy to throw my face on TV, because in the end I am the poster boy for fear. Because I represent what everyone is afraid of, because I say and do what I want." There are multiple other situations that are more recent however- Columbine is famous and memorable. The arts are powerful, they can shape society for the good or they can tear it apart depending on which kind the citizens choose to tolerate and support.

The act of making and observing art utilizes all parts of the brain. This form of communication yields visually literate individuals who are tolerant of others, and overall are

comfortable with themselves. Students who have had exposure to the arts generally make better grades than their peers. The arts can have a positive or negative effect on people depending upon the kind they choose to entertain.

### **Art and Imagination**

In art, children are only limited by their imaginations. Art allows them to make visual manifestations of abstract ideas. “Stimulating the imagination is not an alternative educational activity to be argued for in competition with other claims; it is a prerequisite to making any activity educational,” (Eisner, 2002).

Greene stated that aesthetic education, involves the student’s creativity to view matters in ways that would not ordinarily be interpreted otherwise. It is what allows us to cross the empathy spaces between ourselves and others’ imagination. It is what permits us to give credibility to alternative realities. It lets us drop what is taken for granted, and to set aside the familiar (Heid, 2009). Imagination can create what Greene calls, “utopian thinking”; thinking “that refuses mere compliance, that looks down roads not yet taken to the shapes of more fulfilling social order, to more vibrant ways of being in the world,” ( as cited by Pinhasi-Vittorio, 2013, p. 60).

There are human achievements in every culture on this earth that represent successes of the human imagination, works of such accomplishment that they alter the ways in which the viewer looks upon the world. Examples in ancient architecture would be: The Great Stupa in Sanchi, Mayan ruins, the pyramids of Egypt, the Taj Mahal on the Yamuna River, the Roman Colosseum, and Petra in Jordan. Artifacts of sculpture that come to mind are: the terracotta army made for Qin Shi Huang (China’s first emperor), Michelangelo’s David and Pieta, and the Thinker made by Auguste Rodin, the rich tribal sculptures and art from Africa, and Celtic and Norse artifacts still impact our cultures today. Along with paintings like the Mona Lisa, the ceiling of the Sistine Chapel, intricate patterns of Islamic Art, and the work of Salvador Dali,

Gustav Klimt, and Jackson Pollock. “Imagination gives us images of the possible that provide a platform for seeing the actual, and by seeing the actual freshly, we can do something about creating what lies beyond it. Imagination, fed by sensory features of experience, is expressed in the arts through the image. The image, the central term imagination, is qualitative in character, “ (Eisner, 2002). The arts have an important role to play in refining our sensory system and cultivating our imaginative abilities. “For young children the sensory world is a source of satisfaction, and imagination a source of exploratory delight,” (Eisner, 2002).

### **Conclusion**

In summation, art has impacted the world since the beginning of drawings discovered in various cave dwellings, to the finest present-day buildings. Art has established itself as relevant to society and those making the art essential in the integral role it plays in the establishment of our education and culture. Art is subjective, and exercises all parts of the brain. Artists are investigators of reality. The arts enable imaginations to thrive, and encourages problem solving and critical thinking. Art allows people to make visual manifestations of abstract ideas. “Art is clearly an expression of our aesthetic response to beauty,” (Kemp, 2009). Making art uses what we see and is a demonstration of neurologic rules in action. Art can improve a child’s self-esteem. Children that are involved in the arts are more confident, willing to take risks, take pride in their work, and show compassion toward other human beings. Art permits us to better understand our world by speaking to our intellect, memory, emotions, and senses simultaneously. Artists enjoy participating in the quest for knowledge and exploring perception.

## **Chapter 3**

### **Methodology and Procedures**

The purpose of this study was to examine art and off task behavior. The study reviewed the relationship between students' performance in art club and then off task behavior in English/language arts classes. For the purposes of this study the art club was open exclusively to children in seventh and fourth grades.

### **Population**

The research study took place in a rural school located in East Tennessee. The school served 423 students. Of the schools' population, 51.4% were categorized as economically disadvantaged. English-language learners made up 3.8%. The demographics of the school were as follows: 91.3% White, 6.6% Hispanic or Latino, 1.4% Black, and 0.5% Native American.

### **Sample**

The sample of this study was drawn from two 7<sup>th</sup> grade classes (total of 58 students), and two 4<sup>th</sup> grade classes (total of 44 students). The art club was open to both of these groups, however, students had the choice of attending, and therefore the sample was not at random. The seventh grade club consisted of 6 students with 4 being female and 2 male. The fourth grade club included 18 students with 2 being male and 16 female.

### **Data Collection Instruments**

Data for this study were collected using observations, teacher made tests, and tallying of off task behaviors. The sample was taught art for ten weeks and at the end of ten weeks the students were administered a test to determine their performance. At the same time the students were being taught art, their off task behaviors were observed in the language arts classroom and

recorded. Data were analyzed to determine the relationship.

### **Procedures**

Before the study began, permission was granted from the art teacher, principal, and the Institutional Review Board of Milligan College. Permission forms were sent home to parents/guardians of the students who would be participating in the study. Upon receiving appropriate permission, the study was carried out during a 10 week period of a semester.

The sample consisted of two groups of students that met once a week. The seventh graders met on Mondays, and the fourth graders met on Wednesdays. Due to transportation issues, one fourth grader had to discontinue participation in the art club.

The first week of meetings involved the students being asked a series of questions, such as: what is art, what did they enjoy doing outside of school, what was their favorite subject in school, and what did they hope to learn or achieve in art club. These conversations were followed by a short lesson on Line that involved the students partnering up and doing contour and gesture line drawings of one another. The following 5 weeks of meetings were spent mainly working on an acrylic painting on canvas project, with some time spent exploring the work of contemporary and historical artists' work, and some different media. The final 4 weeks of meetings were utilized similarly, but working on clay-based ventures.

The students were observed for participation, interaction, and responses to conversation and artwork. Information was noted, gathered, and assessed after each art club meeting. The final outcomes were determined at the end of the 10 week session.

### Research Questions

- Research Question 1: Is there a correlation between behavior in the regular classroom and participation in art club?
- Research Hypothesis 1: There is correlation between behavior in the regular classroom and participation in art club.
- Null Hypothesis 1: There is no correlation between behavior in the regular classroom and participation in art club.
- Research Question 2: Does more art experience equal better behaved children in other classroom settings, like English/language arts classes?
- Research Hypothesis 2: More art experience equals better behaved children in other classroom settings, like English/language arts classes.
- Null Hypothesis 2: more art experience does not equal better behaved children in other classroom settings, like English/language arts.
- Research Question 3: Is there a relationship between students' knowledge of using various media and art club?
- Research Hypothesis 3: More art experience yields more knowledge of art materials and skill.
- Null Hypothesis 3: More art experience does not yield more knowledge of art materials and skill.

## Chapter 4

### Data Analysis

The purpose of this study was to examine the relationship between students' performance in art and behavior in the regular classroom.

#### Collection of Data

The data for this research project were collected through meeting with a group of fourth grade students once a week for an art club session for one hour. The students completed multiple art projects with a variety of media, displaying knowledge of various procedures and techniques. The data for this study were collected from 4<sup>th</sup> graders in an art club where there were 18 total participants in the group, with 2 being male and 16 female. After 10 weeks, the students were graded on craftsmanship and media knowledge. Data were also collected using a classroom behavior instrument. The profile for participants in the study is displayed in Table 1.

Table 1.

Profile for Participating Students

Gender	Frequency	Percent
Male	2	11%
Female	16	89%
Total	18	100%

#### Research Question 1

Research Question 1: Is there a correlation between behavior in regular classroom and participation in art club? To answer this research question, a Pearson Product Moment Correlation was calculated to determine if the mean of the students participating in art club was correlated to their behavior in the regular classroom. The mean for participating in art club was 2.28, and the mean for behavior in normal classroom was 3.39. The results indicated a

significance between participating in art club and classroom behavior ( $r= 0.689$ ,  $p= 0.002$ ). The results are displayed in Table 2.

Table 2.

Correlation between Art Club Score and Classroom Behavior

Variable	M	r	p
Art Club	2.28	0.685	0.002
Behavior in Normal Class	3.39		

### Research Question 2

Research Question 2: Is there a relationship between students' knowledge of using various media and art club? To answer research question two, the mean score for media and art club were calculated. The mean score for media was 2.94, and the mean score for art was 2.28. A Pearson Product Moment Correlation was completed to determine a correlation. The results indicated a significant relationship ( $r= 0.561$ ,  $p= 0.015$ ). The results are displayed in Table 3.

Table 3.

Correlation between Media Knowledge and Art Club

Variable	M	r	p
Media Knowledge	2.94	0.561	0.015
Art Club	2.28		

## **Chapter 5**

### **Discussion**

This chapter contains a summary of findings, recommendations for future study, and implications based on the research investigating the relationship between students' performance in art and their off-task behavior in ELA class.

### **Summary of Findings**

In response to research question 1: Is there a correlation between behavior in regular classroom and participation in art club? A Pearson correlation test was conducted, and results indicated a positive correlation of  $r = 0.689$ . This is consistent with findings in the literature review which stated that, "More art making opportunities may result in fewer behavior problems, less depression, emotional problems, conduct outbursts, and hyperactivity. Art may also give students confidence in school and daily living. Art can improve a child's social behavior," (Reuters, 2015). The researcher believes that in regards to participation in art club classes and behavior in regular classrooms that the students learned to calm down and to stay focused during art and these behaviors translated into concentration in the regular classroom when engaged in tasks.

In response to research question 2: Is there a relationship between students' knowledge using various media and art club? A Pearson Product Moment Correlation was conducted and results indicated a significant relationship, ( $r=0.561$ ,  $p= 0.015$ ). The null hypothesis was rejected. The findings are consistent with the review of literature that stated, "Since it is generally accepted that progress, success, and happiness in life depend upon the ability to adjust to new situations, the importance of art education for personality growth and development can easily be recognized," (Eisner, 2002, p. 12). It can be concluded that more exposure in art club to media and art processes, produces more knowledge, confidence and comfort with materials in

individuals. Students in art club will produce better constructed art pieces in art class and regular classrooms. When students are comfortable in a classroom, they generally are better behaved than those that are nervous and/or edgy.

### **Conclusion**

The purpose of this study was to determine the relationship between students' performance in art and behavior in the regular classroom, as measured by the Pearson Product Moment Correlation test. Research question number one, which focuses on behavior in the regular classroom and participation in art club the results indicate a significant relationship between the variables. Research question two explains the relationship between students' knowledge of media and art club, the relationship was found to be significant. The correlation between the variables was found positive.

### **Recommendations**

1. Future research in this subject should include older subjects to see what role art plays in those students' behaviors.
2. Researchers could follow the same guidelines, but instead of doing projects that involve multiple types of media and processes, they could limit the techniques and media utilized.
3. A different design is recommended to determine if comparable results could be found.

### **Implications**

1. General classroom teachers should incorporate arts activities into their lessons, because it improves student behavior.
2. School administrators should be encouraged to gain a better understanding of the impact visual art can have on student performance.
3. Students can be inspired to learn that art is in every aspect of our visual world, and should be appreciated.

### References

- Baker, Dawn. (2013). Art integration and cognitive development. *Journal for Learning Through the Arts*. University of South Carolina, Columbia. [escholarship.org/uc/item/9wv1m987](http://escholarship.org/uc/item/9wv1m987)
- Becker, B., Luthar, S. (2002). Social-emotional factors affecting achievement outcomes among disadvantaged students: Closing the achievement gap. *Educational Psychologist*, 37(4), 197-214.
- Benaroch, Roy. (2011). Class Act: the sexes really do learn differently. A is for “action” when it comes to educating boys. Parenting matters expert advice for kids’ sake. *webMD magazine*. [webMD.com](http://webMD.com). P. 47.
- Brooks, K. (2014). Arts and culture: study says making art is good for your brain, and we say you should listen. *Huffington Post*.
- Buffenstein, A. (2016). Art news: 12 sound artists changing your perception of art. These artists appeal to the ears not the eyes. *Art World*.  
[News.artnet.com/art-world/12-sound-artists-changing-perception-art-587054](http://News.artnet.com/art-world/12-sound-artists-changing-perception-art-587054)
- Bush, J. (1997). *The handbook of school art therapy*. Springfield, IL: Charles C. Thomas.
- Chernoff, C. (2009). Commentary on culture, art, and experience. *Perspectives on Urban Education*. University of Pennsylvania. P.77.
- Chibbaro, Julia S. (2011). Creative approaches to school counseling: using the visual expressive arts as an intervention. *GSCA Journal*.
- Cinzia, DD., Vittorio. (2009). Neuroaesthetics: a review. *Curr Opin Neurobiol*. 19: 682-7.  
DOI: 10.1016/j.conb.2009.09.001
- Collins, Anita. (2014). Neuroscience, music education and the pre-service primary (elementary) generalist teacher. *International Journal of Education and the Arts*, 15 (5). University of Canberra, Australia. ISSN: 1529-8094.
- Eisner, Eliot W. (2002). *The Arts and the Creation of Mind*. Yale University Press. New Haven.

London.

Heid, Karen. (2009). Dancing with line: inquiry, democracy, and aesthetic development as an approach to art education. *International Journal of Education and the Arts*, 10 (3). ISSN: 1529-8094.

Hotz, R. (2015). Researchers observe effects of art on the brain.

Huang, Mengfei. (2009). The Neuroscience of Art. *Stanford Journal of Neuroscience*. 2(1).  
<http://web.stanford.edu/group/co-sign/Huang.pdf>

Kahn, J. (1999). Art therapy with adolescents: Making it work for school counselors. *Professional School Counseling*. 2 (4), 291-298.

Kemp, M. (2009). Art history's window onto the mind. 461, 882-883.  
DOI: 10.1038/461882

Landau, E. (2012). What the brain draws from: art and neuroscience. CNN  
[www.cnn.com/2012/09/15/health/neuroscience/art-brain-mind](http://www.cnn.com/2012/09/15/health/neuroscience/art-brain-mind)

Landreth, G. (2002). *Play therapy: The art of the relationship* (2<sup>nd</sup> ed). New York: Brunner Routledge.

Lynch, Grace. (2012). The importance of art in child development. Child Development Institute. PBS.

Malchiodi, C. (2005). *Expressive therapies*. New York: Guilford Press.

McNamee, Carole. (2006). Experiences with bilateral art: a retrospective study. *Art Therapy: Journal of the American Art Therapy Association*. Blacksburg, VA. 23(1). P. 7-13.

Nasrin, Shourie., et al. (2013). Investigation of EEG alpha rhythm of artists and non-artists during visual perception, mental imagery, and rest. *Journal of Neurotherapy*. 17:#. 166-177.

Pinhasi-Vittorio, L. (2013). The arts to encourage multiple perspectives and promote social justice. *Journal of Language and Literacy Education*, 9 (1), 54-72.

[jolle.coe.uga.edu/wp-content/uploads/2013/05/The-Arts-to-Encourage-Multiple-Perspectives.pdf](http://jolle.coe.uga.edu/wp-content/uploads/2013/05/The-Arts-to-Encourage-Multiple-Perspectives.pdf)

Rastle, Maraget Ann. (2008). Individual art therapy counseling with at-risk children in a school setting. Ursuline college graduate studies.

Reuters. (2015). Art therapy may help kids with behavior problems. Fox News.

<http://www.foxnews.com/health/2015/01/16/art-therapy-may-help-kids-with-behavior-problems.html>

Rose, FC. (2006). Editor. The neurobiology of painting. Int Rev Neurobiol. 74

Ruppert, Sandra. (2006). Critical evidence: how the arts benefit student achievement. National Assembly of State Arts Agencies.

ISBN: 0-9777050-0-5.

Scott, GD. (2012). The aesthetics of neuroscience- and the neuroscience of aesthetics. Oxford University. 641-644.

DOI: <http://dx.doi.org/10.1093/brain/awr/316>

The Importance of the Creative Arts for Children and Teens. Child Development Institute.

[https://childdevelopmentinfo.com/learning/multiple\\_intelligences/the-importance-of-the-creative-arts-for-children-and-teens/](https://childdevelopmentinfo.com/learning/multiple_intelligences/the-importance-of-the-creative-arts-for-children-and-teens/)

Zeki, Semir. (1999). Chapters 1,2, and 3 of Inner Vision: an exploration of art and the brain. Oxford Universtiy Press.