

# Assessing Creativity in Students with Autism in an Art Classroom Setting

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## **Abstract**

To identify best practices regarding assessing creativity in students with autism in an art classroom setting, this paper examined the research from the perspective of art education, creativity, and autism in relationship to each other and assessment. The number of children diagnosed with autism spectrum disorder (ASD) is steadily increasing. Research shows that art educators do not feel prepared for the influx of students with autism. There is a lack of training provided by administration, lack of communication among administration, art educators and IEP teams, and a loose adherence to IDEA. Due to the subjectivity of creativity, and the range of ways that autism can affect individuals, it is challenging to assess creativity in students with autism.

Quantitative assessments that only assess end products are not the best choice for assessing creativity, or students with autism. Qualitative assessments that focus on assessing the creative process, are more appropriate. There are theories and models that fall under the umbrella of qualitative assessments. Three theories of assessment discussed in this paper include authentic, formative, and performance-based assessment. There is a lack of research that specifically addresses assessing creativity in students with autism in an art classroom setting. However, studies show that a formative assessment model is successful in assessing students with autism in an art classroom setting, assessing creativity in students with autism, and assessing creativity in non-autistic students in an art classroom setting. Therefore, it is recommended that formative assessment would be the best practice for assessing creativity in students with autism in an art classroom setting.

**Keywords:** assessment, creativity, autism spectrum disorder, art education

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## **Introduction**

The 2025 autism prevalence report shows a 2.7% increase in 8-year-old children diagnosed with autism from 2020 to 2022 (Autismspeaks, 2025). The increase of children diagnosed with autism impacts the public school system. There has been a significant increase in inclusive practices and autistic support classrooms within public schools. The classrooms include students with Level 1, 2, and 3 autism. Level 1 autism is defined as “students requiring support,” and requiring some differentiated instruction and modifications. (Autismspeaks, n.d.). Level 2 autism is defined as students requiring “substantial support,” and may have marked deficits in social and behavioral skills (Autismspeaks, n.d.). Level 3 is defined as students requiring “very substantial support,” and may have severe deficits in social and behavioral skills (Autismspeaks, n.d.).

Students who are Level 1 are usually integrated into regular education classes throughout the day, including “specials.” Special areas include art, music, gym, library, and STEM. Most students, who are categorized as Level 2 or 3, stay in their classroom for most of the day, but as a class, will leave to participate in specials. A student with Level 2 autism might be integrated into the regular education specials classes, accompanied by an aide or paraprofessional. Research shows that while art educators support the integration of students with autism into regular education classes, most do not feel prepared (Begeske et al., 2021; Wexler, 2022). Art educators lack training, communication with IEP teams, and curriculum to instruct students with autism.

A specific curricular issue that art educators find challenging is how to assess creativity in students with autism in an art classroom setting. Assessing creativity is already challenging for art teachers due to the subjectivity of creativity (Gates, 2017). Finding ways to assess individuals with autism is challenging due to the uniqueness and diversity among individuals with autism

(Holt, 2024). The traditional assessment process, based on meeting benchmarks in a standards-based curriculum, does not consider the individual needs and learning processes of a student with autism. It is the intention of this paper to find best practices for assessing creativity in students with autism in an art classroom setting.

To identify best practices regarding assessing creativity in students with autism in an art classroom setting, this paper will research the literature regarding art education, creativity, and autism, in relationship to each other and assessment practices. By researching the relationships among art education, creativity, and students with autism in regard to assessment, it will become clear which assessment models works best for each area. Researching each area of the issue creates a more holistic picture and can determine the best model for assessing creativity in students with autism in an art classroom setting.

## **Literature Review**

Literature was examined to gain a better understanding regarding why art educators feel unprepared to assess students with autism. Begeske et al. (2021) discuss acts and legislature that have been created for students with disabilities, specifically, those related to the inclusion movement, such as IDEA. The Individuals with Disabilities Education Act (IDEA) requires that all students with disabilities be educated in their least restrictive environment (LRE) with access to non-disabled peers and to the general education curriculum to the maximum extent possible while also making progress toward individual education program goals (IDEA, 2004).

### **Art Education**

Begeske et al. (2021) found that art educators feel unprepared to instruct students with disabilities in both inclusive and self-contained instructional environments. This is true in K-12 and college levels. They attribute this to a lack of education and training for art educators regarding teaching students in special education, including students with autism spectrum disorder (ASD). Their study results showed that without proper training, educators can have preconceived ideas about students with autism.

Bolourian et al. (2022) conducted a study to determine topics for professional development in regard to autism and inclusive practices. Their study results showed that how educators perceive students with disabilities and inclusive practices, may impact on their willingness and confidence to accommodate them. In addition, they found that teachers felt low levels of efficacy when teaching students with autism (Bolourian et al., 2022). Education and training can help teachers alleviate preconceived ideas associated with ASD and encourage a more positive outlook about inclusion practices (Bolourian et al., 2022).

At the college level, art teacher preparation programs have changed in response to federal policy and are guided by national professional standards and state standards. The National Association of Schools of Art and Design (NASAD), includes standards for teaching competencies related to the ability to differentiate methods or materials based on student need (NASAD, 2019). Colleges have implemented the one required introductory course for special education, but it is not enough to prepare educators (Begeske, et al., 2021). Wexler (2022) agrees that this is a problem that affects teachers from elementary level-college level. In her article, she states that teachers are unprepared and need more training for the specific needs and challenges of students with autism.

An important part of an inclusion process is a student's IEP. Lambert (2018) conducted a survey to address how art educators felt about Autism inclusion within their art classroom. Her survey included 30 art educators ranging from preservice to 30 plus years of experience, and varying grade levels. Results showed that while every educator had taught students with ASD within their classroom setting, they received "average" support (Lambert, 2018). Participants reported that a big challenge of meeting ASD students' needs is finding the support, time, and management, alongside the rest of the classroom with various other student needs (Lambert, 2018). The most challenging aspect for many art educators was providing lesson plan modifications for individual students to meet IEP expectations (Lambert, 2018). A strategy to help art educators feel more prepared to teach students with ASD is to include them in the IEP team. Begeske et al. (2021) and Lowe (2016) both emphasize the importance of art teachers working with the IEP team for student success. Lowe (2016) emphasizes the connection between IEP's and assessment. She states that a student's IEP should be used when assessing the student's

artwork. Art assignments should be modified, monitored, and assessed, according to the individual student's skill levels (Lowe, 2016).

## **Creativity**

The Islands of Brilliance non-profit organization is working to change the broad views that neurodivergent individuals have creative limitations due to their disability. The Islands of Brilliance's educational model uses the principles of project-based learning and universal design, to emphasize a "participant-led creative self-expression to support the participant's innate creativity" (Holt et al., 2025, p.2). The model supports the idea that the creative process is more important than the creative output. In their research, Holt et al. (2025) note the reported gaps in the literature regarding ideal ways to measure creativity in individuals with autism. They attribute the gaps to the uniqueness and diversity among individuals with autism. In their study, they found that individuals with autism can be particularly creative when they work in their special interest area (SpIn) (Holt, et al., 2024). Originally thought to be a restrictive characteristic, a SpIn is now seen as a gateway into creativity, education, and connections for people with autism (Holt et al., 2024).

In their study, Aleksandrovich & Zoglowek (2014) compare the creativity of children with autism (ASD) to non-autistic students (non-ASD). They present different perspectives and definitions of creativity and emphasize the subjectivity of creativity. They state that creativity can be influenced by an individual's personal qualities, access to content, or free time to experiment. They note the contrasts in previous research that has found children with ASD showed deficits in imaginative content and little or no creativity, while savants displayed creativity beyond that of a non-autistic individuals and children with autism do have imagination

and creativity, but need specific support and encouragement to be able to show it (Aleksandrovich & Zoglowek, 2014).

In their study, Aleksandrovich & Zoglowek (2014) used the Goodenough-Harris Drawing Test in the version Auto Portrait. To analyze and evaluate the drawings, and examine creativity, they developed their own evaluating scale based on the categories of line, size, color, and detail. The results indicated no statistically significant differences were found in the drawings of ASD and non-ASD children. However, the children with autism's drawings were similar in details, but lacked variation (Aleksandrovich & Zoglowek, 2014).

Jolley et al. (2013) conducted a study where they predicted that the quality of expressive merit in drawings would be relatively weak in the sample with autism children, compared to other non-autistic children. They also predicted that the quality of their expressive drawings would be significantly and positively associated with their mental age, but not their chronological age. For the study, students were given a booklet and instructed to draw a happy picture and a sad picture. The drawings were analyzed based on the quality of expression using a 7-pt scale, and if it included content related to a "people theme" or a "social theme" (Jolley et al., 2013).

Jolley et al. (2013) found that there was little difference between the drawings of the children with autism and the learning-aged-matched controls in the expressive drawings, suggesting that differences in mental age, not autistic traits, were the main determining factor in the expressive drawings from the autism sample. Children with autism showed literal expression in their drawings. This could be attributed to a rule-based approach to social learning, which teaches students with autism how to depict literal facial expressions (Jolley, et al., 2013). The children with autism depicted people in a more developmentally immature form than learning

age-matched children. This could be attributed to their lack of interest in people, which inhibits their motivation to graphically develop the human figure form (Jolley, et al., 2013). Lastly, the children with autism showed fewer social scenes, possibly due to the paired lack of interest in people and emotional impairment, since the two are typically linked (Jolley et al., 2013).

According to Roth (2018) there is a debate over the potential for creative imagination in people with autism. She states that there are people with autism that creatively express themselves through the visual arts. There are people with autism who are exceptional artists. Their creativity is often questioned or gets attributed to “talent” or “savant talent,” implying that it is a mental process instead of creativity (Roth, 2018, p.3). When their work does get recognized, it often gets grouped together and categorized as “outsider art” instead of having the same merit as their neurotypical peers (Roth, 2018, p.4). Just like neurotypical peers, people with autism might express themselves in different ways. A preference for one style or another does not mean they are not being creative. Roth suggests that maybe a “wider examination of our core assumptions about creativity” is in order (Roth, 2018, p.6).

Fitzgerald & Lyons (2013) examine different scientific approaches regarding creativity in individuals with autism. Accomplishments that individuals with ASD show in creative and scientific fields have theorists challenging views that individuals with ASD lack creativity. They emphasize the idea that while intellectual abilities may be useful in creative work, no intellectual ability is devoted only to creativity. The article states that “neuroscientific approaches aiming to determine the physiological basis of creative thought, are assuming that creativity is a measurable trait” (Fitzgerald & Lyons, 2013, p.777). Yet, they state that they are not aware of any studies directly investigating the neural basis of creativity in autism apart from studies exploring savant skills in autism. Their article includes what scientific studies have determined

about autism. One is that structural brain abnormalities seen in autism are related to the specific cognitive functioning that encourages creativity (Fitzgerald & Lyons, 2013). The nature of creativity displayed by individuals with ASD is associated with the distinctiveness of the autistic brain and its unique neural connectivity (Fitzgerald & Lyons, 2013). Understanding the neural basis of autism may lead to a better understanding of autistic creativity and creativity in general (Fitzgerald & Lyons, 2013).

### **Anti-Ableism Theory**

Research emphasizes the need for art educators to use an anti-ableist theory (Wexler, 2022). Ableism is “the belief that people are automatically better, have better lives, or have better brains or bodies because they aren’t disabled” (The Autistic Self Advocacy Network, n.d., as cited by Larsen, 2018, p.77). An anti-ableist approach encourages art educators to examine their curriculum, and revise it to reflect a “safe, noncompetitive environment” for students (Wexler, 2020). Anti-ableist theory stresses the importance of using “assessment criteria that acknowledges and values individual experience over perceived quality judgement” (Penketh, 2020, as cited by Wexler, 2022, p. 34). Using an anti-ableist theory in an art classroom environment, the art educator would focus on the creative process more than the end product. Wexler describes how she used an anti-ableism approach, creating art lessons that were collaborative, open-ended and allowed students to work in a non-traditional way. This freedom allows all students to engage in an artmaking process in a new way, benefitting both disabled and nondisabled students (Wexler, 2022).

### ***Neurodiversity Paradigm***

Being a neurodiverse college student, Larsen (2018) is able to give a unique perspective about neurodiversity within an educational setting. Her article talks about ableism and the

importance of including disability studies in art education teacher preparation curricula in higher education, as a key step in confronting ableism (Larsen, 2018). An important part of an anti-ableist approach is understanding the neurodiversity paradigm. “The neurodiversity paradigm is the idea that every person’s brain is wired differently, and there is no right or wrong type of brain” (Walker, 2013, as cited by Larsen, 2018). Human brains have natural differences. (Larsen, 2018). Larsen explains that her autism affects the way she thinks, learns and perceives her surroundings. To help students with autism in a classroom setting, Larsen suggests keeping environments quiet and structured, giving fewer verbal instructions at one time, chunking assignments, using natural light, allowing for breaks, and giving seating options (Larsen, 2018).

At the college level, neurodiverse students have negative experiences because of the barriers they face. These academic barriers include weaknesses in executive functioning skills such as time management and organization, inadequate study skills, and unexpected high demands on information processing such as reading (Accardo, A.L. et.al, 2024). Students with autism often need individualized accommodations. Obtaining individualized accommodations to meet the unique needs of neurodiverse students is challenging (Accardo, A.L. et.al, 2024). There are faculty and staff who want to help, but do not know how.

### **Assessment and Creativity**

The National Art Educator’s Association (NAEA) states that “quality assessments are critical to effective instruction and comprehensive delivery of the visual arts curriculum” (NAEA, 2021). They state that a variety of developmentally appropriate assessments are vital to best practices in art education. Assessments can include formative, summative, portfolio assessment, peer assessment, rubrics, and self-assessment. Their position on assessment emphasizes the “importance of on-going

assessments that are standards-based and primarily assess performance” (NAEA, 2021). This includes the importance of the learner reflecting and evaluating the creative process and the final product. Assessment criteria should be shared with the student and focus on growth and creative development (NAEA, 2021).

Gates (2017) specifically addresses challenges for art educators in assessing student artwork. One challenge lies in creating an assessment instrument to assess creativity. Gates argues that subjective judgements are a necessary part of an art educator’s practice. Even when efforts are made to create assessments that are objective, it is difficult. For example, when art educators create rubrics, even based on specific criteria, how the educator chooses to categorize what constitutes an “Outstanding” or “Satisfactory” is subjective (Gates, 2017). Rubrics should not just assess formal elements. Art educators should also be assessing creativity, despite its subjectivity (Gates, 2017).

Art educators may question their ability to assess someone else’s creativity. Gates (2017) makes the point that subjectivity in the assessment process is valuable and necessary. It is equally important for students to know the formal aspects of art and the creative process of applying them to their art. Assessing creativity is something that art teachers do regularly, but informally within an art classroom setting. The problem comes from trying to formulize it.” Art educators know creativity when they see it, they just have a problems describing it for others” (Wiggins, 2012, cited by Gates, 2017, p.27). Gates concludes her article by suggesting strategies that use quantitative data from rubrics that include qualitative, subjective language. She believes that art educators can create tools that assess quality of work, skills, and dispositions that can then be used for quantifiable purposes when needed (Gates, 2017).

## **Assessment**

### ***Formative Assessment***

Andrade et al. (2014) participated in the Artful Learning Communities project. The project examined formative assessments in art classroom settings. The project had three major goals that included assessments. One goal included assessing standards-based learning in the arts. A second goal was promoting increased student achievement in the arts through ongoing classroom assessment. A third goal was to develop the ability of specialists to define, systemize, and communicate their assessment strategies and tools. In working with formative assessment, Andrade, et al. (2014) explained the distinction between assessment and evaluation as assessment is formative and evaluation is summative. Using formative assessments as part of the creation process, art educators noticed an improvement in student engagement and higher quality of artmaking (Andrade et al., 2014).

Videira (2018) researched the impact of formative, process-oriented assessments on students with special needs in an inclusive art classroom. The research reflected the benefits of using formative assessments in an art classroom setting, such as allowing for lesson modification, and opportunities for students to think about their art making process. However, it lacked information that specifically addressed formative assessment and special needs populations in an art classroom setting.

Videira (2018) proposes that formative, process-oriented assessments positively impact the learning and engagement of students with special needs in an inclusive art classroom setting. Her study included a student with autism and neurotypical peers. Using formative art assessments improved learning and engagement of Videira's student with ASD and her

neurotypical peers (Videira, 2018). In addition, she was able to assess the thinking process of each student better and pinpoint which material made the most sense to each student (Videira, 2018).

### ***Assessing Students with Disabilities***

Assessment is a specific part of an art curriculum where educators struggle, particularly when assessing students with ASD. According to Cevirgen et al. (2018) this is due to the lack of training on how to assess students with ASD, the subjectivity of assessing creativity, and the complexity of assessing creativity in students with ASD. Cevirgen et al. (2018) conducted a study using qualitative methods of assessment including the use of interviews and a portfolio analysis. Portfolios were created by accumulating artwork that a student with ASD created in the visual arts course during the school year. It was evaluated according to a checklist prepared by a field expert. Looking at an accumulative portfolio in chronological order helps the educator determine growth and not just evaluate with the checklist (Cevirgen et al., 2018). Interviews were conducted about the process with the student, parents and art teacher. The data collected from the interviews and the portfolio assessment was being used to develop a visual arts course for a child with ASD.

Gross (2024) discusses types of assessments in regard to students with disabilities, in an inclusive art setting. She contends that when having an inclusive art experience, student learning should be assessed by growth. She does not agree with assessment methods such as standardized tests that do not factor in artistic growth, and could be invalidated by factors such as mental age, intelligence, and could be culturally insensitive (Gross, 2024). Gross disagrees with universal theories of drawing development that use visual images to measure intelligence. She claims that

they have a low correlations with other types of intelligence tests and do not consider the learning disabilities of children in relation to IQ levels and age-level peers (Gross, 2024).

### ***Performance-Based Assessment***

It is difficult to evaluate critical thinking and creativity (Dilmac & Dilmac, 2020). Dilmac and Dilmac (2020) are proponents of performance-based assessment. In their article, they explain the benefits of a performance-based assessment model. A performance-based model uses alternative assessments methods such as portfolios, projects, and rubrics. By using a performance-based active process instead of a result-oriented assessment, art educators have a means to understand a student's weaknesses and strengths. Alternative assessments are especially beneficial to students with different learning styles. Implementing a variety of assessment methods and practices help art educators obtain more accurate information about the artistic learning processes in their students. In their study, Dilmac and Dilmac evaluated teacher proficiency levels using alternative assessment tools. The results show that teachers were able to use performance assessments effectively in the classroom setting (Dilmac & Dilmac, 2020). They suggest increasing teacher training in these methods at the undergraduate level, and having suitable environments for them to practice methods within their courses.

### ***Standardized Testing***

The theory behind standardized testing in schools is that by holding schools accountable for student achievement, the public will be ensured a quality, equitable education for all students (PDE, 2002). Standardized testing is used to assess student achievement in core subject areas. As part of the Goals 2000 school reform effort, National Education Goals, and National and State Content Standards, were being developed by the NAEP. The National Visual Art Standards, consisting of six national art standards from the early 1990's,

were written by art professionals as part of the Goals 2000 Act. The standards specify the basic performances that need to be assessed, but not the artistic skills to be taught. If students are not required to be assessed in arts and humanities through standardized testing in their state, art educators must create their own assessments to assess student learning based on those standards.

Dorn (2002) conducted a study using the Models for Assessing Art Performances (MAAP) to assess how well art educators are able to evaluate themselves within classroom settings. The results showed that educators were capable of evaluating themselves and setting their own standards to produce qualifiable and quantifiable estimates of performance (Dorn, 2002). Educators provided valid and reliable estimates of student performances. The educators used project rubrics to effectively measure student expressive outcomes (Dorn, 2002). Unlike rubrics, standardized tests do not consider all things. Standardized tests do not take into account the diverse student and teacher populations, different curricular goals and unequal learning environments. (Dorn, 2002).

The National Art Educator's Association put forth a statement regarding its stance on standardized testing. In the statement it stresses the importance for instruction in arts education to be "uninterrupted, sequential, and high quality" (NAEA, 2024) High stakes testing has the potential to interfere with instructional time in the arts due to student pull outs or loss of instructional time during testing, which undermining the holistic education of the learner (NAEA, 2024). These are valid concerns. According to Pennsylvania State Education Association, 20-50 hours of classroom time is spent overall on student assessments each year (PSEA, 2017). In addition, standardized testing causes anxiety in

students, and that using a single-test assessment fails to tell the whole story (PSEA, 2017).

Sabol (2013) talks about our country's focus on standardized testing, at the expense of developing creativity in our students. Statistics show a steady decrease in creativity among US students (Sabol, 2013). This is in contrast to other countries that make creativity development a priority. He discusses the shift for educators to focus on assessments. Focusing on assessments puts pressure on educators to spend more time developing and scoring assessments and processing and analyzing assessment data (Sabol, 2013). Assessment in art education has unique challenges. Traditional assessment methods do not consider the learning that takes place in art education such as growth, problem-solving skills and creative thinking skills (Sabol, 2013). It is difficult to assess student learning in the arts using tests, rubrics and work samples. "Arts educators routinely struggle to evaluate areas such as personal expression, creativity, and the evolution of ideas and concepts expressed in students' works of art" (Sabol, 2013). Sabol points out that art educators continue to need professional development in order to learn how to create and implement assessments and use assessment results within their art programs (Sabol 2013).

### ***Authentic Assessment Theory***

After the Goals 2000 act was passed, Dorn, et al. (2002) wrote *Assessing Expressive Learning: A Practical Guide for Teacher-Directed Authentic Assessment in K-12 visual Arts Education*. This book was written to help guide art educators with assessment in relation to the new standards-based learning and assessing. The book shares information about surveys they conducted with art educators, and the studies they performed. Dorn, et al. (2002) surveyed educators regarding assessment and found that art educators strongly agreed that students should

be assessed, but the majority believed that there are things in art that cannot be assessed. The survey showed that most people who work in public schools do not believe that new initiatives, such as standardization, will make a difference. However, surveys showed that art educators are aware that the failure to find ways to evaluate the products of instruction in a public school system, could result in program elimination, for lack of accountability and purpose (Dorn, et al. 2002).

The main question that their project sought to answer was “whether the aesthetic object can be assessed quantitatively” (Dorn, et al., 2002, p.93) They note the debate surrounding this issue. A type of evaluation process must be established that assesses the creative thinking process that is manifested in the end product, and a way to assess learning and growth (Dorn et al. 2002). Traditional methods of testing do not work in an art classroom, where studio-based activity is the main source of instruction. There are no national art tests that measures what students are able to know and do in all art programs (Dorn, et al., 2002). They attribute this to an inability to quantify expressive activity and art educators’ unwillingness to teach art in the same way (Dorn, et al., 2002).

Dorn, et al. (2002) support authentic assessment theory. They suggest that art educators use authentic assessments which focus on the “individual and the products of artistic inquiry” (Dorn et al., 2002, p.99). The theory behind authentic assessment is that activities are meaningful, and the learning involves conceptual and higher order thinking skills along with diverse ways of learning (Dorn et al., 2002). The goal of authentic assessment is centered around the development of the individual student’s content and achievement standards, showing growth in expressive and artistic skill to achieve his or her own creative vision (Dorn et al., 2002). Authentic assessments can be used at all levels, for all backgrounds, abilities, and learning styles.

They can reflect performance goals, focus on strengths, and be scored according to clearly stated performance objectives (Dorn et al., (2002). A portfolio is an alternative assessment instrument. A portfolio can keep a collection of work completed by a student over a period of time. They can be used to assess growth, specific skills and techniques (Dorn et al., 2002). To implement authentic assessment practices, it is suggested to use rubrics and portfolios (Dorn et al., 2002) Rubrics are an assessment tool that can help educators make scoring decisions for a performance assessment.

### **Literature Analysis**

In examining the literature regarding the issue of how to assess creativity in students with autism in an art classroom setting, there are gaps found in the literature. No literature was found that specifically addressed the issue of how to assess creativity in students with autism in an art classroom setting. Videira (2018) found gaps in the research when researching the similar topic of formative assessment of creativity in students with autism in an art classroom setting. Holt, et al. (2025) also noted gaps in the literature regarding ways to assess creativity in individuals with autism. As a result of these gaps, the issue was broken down and examined in parts through the lens of art education, creativity, and autism as they relate to assessment and assessment theories, to determine best practices for assessing creativity in students with autism in an art classroom setting.

### **Art Education**

Art educators are not receiving the training, support, and communication they need to feel prepared for the influx of students with autism. The statistics show that the number of students that are diagnosed with autism is on the rise (autism speaks, 2025). Educators are seeing

an increase in students with autism entering their classes, both in inclusive settings and contained classrooms. Despite this increase, educators are not getting the training they need for proper inclusion practices. The lack of training results in educators feeling unprepared, developing preconceived ideas about students with autism, and lacking confidence (Bolourian, 2022; Begeske, 2021; Wexler, 2022). The lack of training and confidence could affect the educator's willingness and ability to accommodate students with autism (Bolourian, et al.).

Art educators are not receiving the communication and support they need from IEP teams. The lack of communication from the IEP team affects an art educator's ability to assess a student with autism in accordance with the student's IEP. Educators must be made aware of the information in a student's IEP to assess accordingly (Lowe, 2016). IDEA requires students to be educated in the LRE with access to non-disabled peers and to the general curriculum to the maximum extent possible while making progress toward individual IEP goals (IDEA, 2004). When there is a lack of communication, art educators do not know what modifications are needed or how to implement the necessary modifications for students with autism (Lambert, 2018). Research shows that including art educators on the IEP team keeps them informed and helps them feel prepared (Begeske et al., 2021; Lowe, 2016)

Administration is not doing their part to help make inclusion processes successful. It is the responsibility of administration to provide training for the art educators regarding students with disabilities. Despite the requirements of IDEA to educate students with disabilities, and make progress toward individual IEP goals, there is a lack of time provided for IEP teams to meet with art educators to communicate goals, and to include art educators on the IEP teams. The lack of cooperation from administration to provide training and support for art educators,

coupled with a lack of support with the IEP process, clarifies why art educators feel unprepared to assess students with autism.

### ***Students***

Students with autism are affected by an art educator's lack of training, communication, and support throughout their entire educational experience. Without the necessary modifications, students are not able to perform their best. Art assignments should be modified, monitored, and assessed, according to the individual student's skill levels (Lowe, 2016). Art educators need to use the information from a student's IEP to assess the student's artwork. At the college level, students want college instructors to be aware of the differences in the way a neurodiverse student thinks and learns (Larsen, 2018). However, they do not want to be seen as less capable because of their disability. Neurodiverse students face many barriers at the college level. It is challenging to obtain the individual accommodations they need (Accardo, A.L. et al, 2014). Without training, instructors might want to help students with disabilities, but do not know how. Disability training for educators should begin in their pre-service education. There is not enough training being required at the college level for pre-service educators. Colleges only require pre-service educators to take one special education class (Begeske et al., 2021). The more education and experience pre-service art educators obtain from their college experience, regarding students with autism, the more prepared and comfortable they will be collaborating with them in the future. Disability studies should be incorporated into an art education preservice curriculum to promote an anti-ableism approach to educating neurodiverse students (Larsen, 2018).

### ***Anti-Ableism Theory***

The theory behind an anti-ableism approach is to dispute ableism: the belief that people are automatically better, have better lives, or have better brains because they are not disabled (The Autistic Self Advocacy Network, n.d., as cited by Larsen, 2018, p. 77). Sometimes students will not disclose information about a disability because they do not want to be singled out or treated differently. Incorporating an anti-ableism approach into an educational practice focuses on creating “safe and noncompetitive environments,” that utilizes non-traditional methods to encourage freedom and collaborative learning (Wexler, 2022). An Anti-ableism approach values process over product in art making and stresses the importance of using assessment criteria that values experience over quality judgement (Wexler, 2022). If an anti-ableism approach values process over product and individual experience over quality judgements, it becomes necessary to understand the relationship between creativity and students with autism.

## **Creativity and Autism**

Individuals with autism can be just as creative as their non-autistic peers. Holt, et al. (2024) and Roth (2018) both acknowledge the debate over whether individuals with autism are creative or not. Holt, et al. (2024), Roth (2018), and Fitzgerald and Lyons (2013) all take the stance that individuals with autism can be creative. They all have a different approach in supporting this idea. Holt et al. (2024) takes the position that individuals with autism have “innate creativity,” particularly when working within their special interest area (Holt et al., 2024). Roth believes that individuals with autism can express themselves through the visual arts. She specifically addresses the issue of whether creativity in individuals with autism is a mental process or actual creativity (Roth, 2018). She states that when individuals with autism display creativity, others are quick to label it as “talent” or “savant,” undermining their creative ability. She points out that just like neurotypical peers, autistic artists express themselves in different

ways (Roth, 2018). Like Holt, et al. and Roth, Fitzgerald and Lyons (2013) agree that individuals with autism can be creative and note the misconceptions about the feasibility of autistic creativity. They take a more scientific approach in looking at creativity and individuals with autism. The accomplishments of individuals with ASD in creative and scientific fields challenge people to rethink their views on ASD and creativity. Fitzgerald and Lyons (2013) explain the relationship between abnormal brain structures seen in autism and the specific cognitive function that encourages creativity. This relationship could account for individuals with ASD that do have savant skills. Developing a greater understanding of the neural basis of autism may lead to a better understanding of creativity in both autistic and non-autistic individuals (Fitzgerald & Lyons, 2013).

### ***Creativity and Assessment***

Understanding the characteristics of autism and the subjectivity of creativity is essential to assessing creativity in children with autism. Researchers have performed studies to examine creativity in children with autism. It is challenging just to define creativity. Aleksandrovich and Zoglowek (2014) use the APA's definition of creativity which states, "the ability to produce or develop original work, theories, techniques, or thought. A creative individual typically displays originality, imagination, and expressiveness" (Aleksandrovich & Zoglowek, 2014). Attention must be paid to the methodology and instruments used to assess children with autism. Jolley et al, (2013), created and used their own instrument for their study to assess expressive quality in drawings by students with autism. Aleksandrovich and Zoglowek (2014) created a modified version of the Goodenough-Harris test, to assess creativity in children with autism. Instruments in both studies involved drawing a person for evaluation purposes. In both studies comparisons were made between children with autism and non-autistic peers.

Jolley et al. (2013) used the drawing prompt of happy and sad to determine the expressive drawing ability in children with autism. Assessment was based on a 7pt. scale created by Jolley to assess the quality of expression, and the use of people or scenery. The findings of their study show that the drawings created by the children with autism were compatible with their learning disabilities. However, they questioned if the use of a person as subject matter for the drawings was a viable choice considering the social and emotional impairments of autistic children and their disinterest in people (Jolley et al., 2013). The impairments might affect an autistic child's motivation or willingness to add a social scene, people, or details (Jolley et al., 2013). This could be an issue in the Aleksandrovich & Zoglowski (2014) study, too, as a modified version of the Goodenough-Harris Test was used in their study, which involved drawing people. Another consideration in both studies was the instruments that were used to measure and quantify data, by assessing the end drawing, not the creative process. Both studies found that when matched with mental aged peers, there were no statistically significant differences in imagination and creativity (Aleksandrovich & Zoglowski 2014) and expression (Jolley, et al, 2013). Gross (2024) disagrees with universal theories of drawing development that use visual images to measure intelligence. They have low correlations with other types of intelligence tests and do not consider the learning disabilities of children in relation to IQ levels and age-levels (Gross, 2024). Student learning should be determined by growth in artistic skill not just progress in technical skill (Gross, 2024). In Jolley et al.'s study, students with autism were matched with actual and developmental age groups. However, they noted specific discrepancies in their findings which they attributed to autism, such as underdeveloped figurative forms, and lack of social scenes (Jolley et al, 2013).

## **Assessment**

It is essential for art educators to create an instrument to assess creativity (Gates, 2016). Art educators know how to look for creativity in a student's artwork, but it is difficult describing it to others (Gates, 2016). Gates explains how it is possible for an assessment instrument to be both qualitative and quantitative. An assessment has to meet the needs of administrators by generating quantitative data, but it also has to have qualitative aspects to allow for subjectivity (Gates, 2016). Gates recommends using rubrics as an assessment instrument that can use qualitative language to assess the quality of artwork, but also be used for quantifiable measures, but warns against creating rubrics that only test formal elements (Gates, 2016). She takes the position that it is equally important to assess the formal aspects of art, as well as the creative process of applying them, (Gates, 2016). Dorn agrees. Even though art educators may find it challenging to assess creativity within an art classroom setting, they are capable of creating their own assessments and assessment tools (Dorn, 2002).

### ***Standards-Based Assessment Theory***

Standardized testing is a way to obtain quantitative data. The theory behind standardized testing in schools is that by holding schools accountable for student achievement the public will be ensured a quality, equitable, education for all students (PDE, 2002). Administration must administer standardized tests, whether or not they agree with the theory of standardized testing. Administration is to oversee the process of standardized testing required by the state according to the state's specific guidelines. In most states art is not a core subject that is tested with standardized testing. For example, in Pennsylvania, art is not a core subject that is tested by its PSSA's or Keystone Exams, but there are Pa Standards for The Arts and Humanities that include benchmarks for 3<sup>rd</sup>, 5<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> grades that need to be met (PDE, 2002). The standards were initiated in the Goals 2000 Act and continue in 2025 under Every Student Succeeds Act.

Standardized tests can be used to generate statistics, and hold school districts, including educators, accountable for academic achievement. There are no standardized visual arts tests other than the National Assessment of Educational Progress (NAEP) model, which only is performed periodically and evaluates a sample of the students across the United States. This can be attributed to the fact that there is no adequate means to quantify expressive activity (Dorn, et al, 2002). In addition, standardized testing in art means teachers would need to teach the same thing, and they do not want to do that (Dorn, et al., 2002).

Research shows that standardized testing is not the best option for assessing creativity or students with autism in an art classroom setting. Standardized testing does not consider the diverse student and teacher populations, different curricular goals, and unequal learning environments. (Dorn, et al, 2002). In inclusive situations, mental age or intelligence could invalidate standardized test results (Gross, 2024). Standardized testing does not consider the learning that takes place in art education such as growth, problem-solving skills and creative thinking skills (Sabol, 2013). Standardized testing does not give a holistic view of the learning that takes place (Sabol, 2013). Standard-based learning and testing in public schools contradict the subjective nature of art and creativity. Ironically, while there is a debate over whether students with autism are creative or not, the US student population, as a whole, is showing a decrease in creativity (Sabol, 2013). This can be attributed to a standard-based curriculum and standardized testing. The effect of standardized testing's focus on developing, scoring, and analyzing assessment data, takes time away from teachers and students. Both the NAEA (2024) and PSEA (2017) show concern over the impact of standardized testing on instructional time. Over 20-50 hours of instructional time each year is spent on student assessments (PSEA, 2017). There is also the concern of standardized testing interrupting or replacing art time due to the

actual testing, prep time, or remedial time. It “undermines the holistic education of the learner” (Art for Life’s Sake, 2021, as cited by NAEA, 2024).

### ***Formative Model of Assessment***

Formative models of assessment work better than summative models of assessment at assessing the creative process. The theory behind a formative model of assessment is the belief that assessment should occur during the process of creating an artwork, not at the end, for the purposes of learning, and modification (Andrade, et al. 2014); (Videira, 2018). Formative models are qualitative in nature. In contrast, the theory behind a summative model of assessment is the belief that the assessment should occur at the end of creating an artwork for the purpose of evaluation (Andrade, et al. 2014). They are quantitative in nature. When referencing formative and summative assessment, it is important to understand that although they are sometimes used interchangeably, there is a difference between assessment and evaluation. Assessment is formative and is conducted throughout the artmaking process, and evaluation is summative and looks at the finished work (Andrade, et al., 2014).

### ***Assessing Students with Autism***

The literature indicates that students with autism should be assessed using qualitative methods. Like Gates (2016), Cevirgen et al. (2018) suggests that it is possible to assess students with autism qualitatively and still give a quantitative assessment for evaluation purposes. Cevirgen found that using a chronological portfolio assessment and student interviews, in addition to a checklist helped determine student growth and gave multiple means of assessment.

Videira (2018) found that using a formative assessment model to assess students with autism in an art classroom setting improved learning and engagement in both her student with

ASD and her neurotypical peers. Formative assessments were helpful in examining the thinking process of each student better and helped to clarify their understanding of the material better. Gross (2024) also noted that using assessments that show learning and growth are better for students with special needs. Mental age and intelligence need to be factored into assessments.

### ***Authentic Assessment Theory***

According to Dorn, et al (2002) art educators should be implementing authentic assessments. In authentic assessment theory, meaningful tasks are performed that involve conceptual, higher order thinking skills, and incorporate different forms of knowledge (Dorn, et al., 2002). Authentic assessment theory takes into consideration diversity, abilities, and learning styles, and can be implemented into all grade levels within the school art program (Dorn, et al., 2002). With authentic assessment theory, the teacher must be clear on what they want the student to know and be able to do and then assess what the students really do know and are able to do. The teacher can help the students learn better when they use the students' strengths to improve their learning. Assessments include the expressive quality of the students' work, the knowledge base from which their aesthetic judgments are formed, and growth in conceptual development, (Dorn, et al., 2002). The focus is more on the creative process than the finished product. To assess growth and learning over a period of time, Dorn et al. suggests a portfolio assessment. The key to assessment in authentic assessment theory is to ask what can be used, and how, to show evidence of growth along with a method to collect the evidence of student growth and learning (Dorn, et al., 2002).

### ***Performance-Based Theory***

The theory behind a performance-based model of assessment is similar to Dorn's description of authentic assessment theory. The performance-based assessment model focuses on a student's weaknesses and strengths throughout the creative process (Dilmac & Dilmac, 2020). Instead of a results-based assessment that focuses on an end product, performance-based assessments focus on the learning and growth that takes place during the active process of creating the product (Dilmac & Dilmac, 2020). Alternative assessment tools are used to assess the more difficult aspects of art to assess, such as critical thinking and creativity. Like Dorn et al. (2002), Dilmac and Dilmac (2020) recommend portfolios and rubrics along with projects as alternative assessment tools. Using the performance-based model, art educators are able to assess performance-based active processes that allow them to identify a student's weaknesses and strengths (Dilmac & Dilmac, 2002).

### **Ethical Concerns**

Ethical concerns related to the issue of assessing creativity in students with autism in an art classroom setting include proper implementation of IDEA, proper autism training for art teachers, supportive environment for art educators, supportive environment for students with autism and best practices for assessing creativity in students with autism. Administration is responsible for properly implementing IDEA policy into practice and enforcing mandated assessments. Administration is also responsible for providing art educator in-services, training and allowing time for IEP meetings. With support, art educators can provide safe, supportive environments for students with autism that include projects and assessments that encourage creativity, growth and learning in all students, and take into consideration modifications and needs of students with disabilities.

Failure to implement IDEA properly can affect how art educators assess creativity in students with autism in an art classroom setting. IDEA requires that all students be educated in their LRE, alongside non-disabled peers, have access to the general education curriculum, while making progress toward their IEP goals (IDEA, 2004). The research shows that art teachers need more autism training. A lack of training may result in students with autism not receiving the help they need to achieve their IEP goals. Art educators feel unprepared to instruct students with disabilities in both inclusive and self-contained instructional environments (Begeske, et al., 2021). They may have preconceived ideas about students with autism that could impact their willingness and confidence to accommodate them (Bolourian et al., 2022). The lack of support makes it difficult for art educators to assess students according to their IEP goals. Begeske et al. (2021) and Lowe (2016) both emphasize the importance of art teachers working with the IEP team for student success. This is particularly important in regard to assessment. Lowe (2016) emphasizes the connection between IEP's and assessment. She states that a student's IEP should be used when assessing the student's artwork. Art assignments should be assessed according to the individual student's skill levels (Lowe, 2016).

The experience that students with autism have in the lower grade levels can have lasting effects. If art educators help students with autism feel comfortable asking for accommodations, and receiving them, early in their education, they may feel more comfortable asking for them later. Larsen (2018) describes how, even at the college level, students with disabilities want to ask for help or accommodation, but do not want to inconvenience the instructors, be singled out, or considered less capable because they have a disability (Larsen, 2018). Art educators need to adopt an anti-ableism theory in their practice to create a safe environment that values diversity and does not make a student with autism feel less than other non-disabled students because they

need accommodations or think differently. When art educators do not promote an anti-ableism approach in their program, other non-disabled students do not learn to appreciate diversity, and students with disabilities do not feel valued as equals. Art educators can plan creative art experiences that can be enjoyable for all students (Wexler, 2022). Art educators need to provide an environment where differences are treated as natural occurrences and not as something that needs to be fixed (Larsen, 2018).

The type of assessments or evaluations that art educators use to assess students with autism is a concern. When art educators fail to use best practices for assessing creativity in students with autism in an art classroom setting, students do not receive their best learning experience, it is through the creative process that students with autism can be assessed according to their learning and growth. Formative models that assess the creative process are better than summative models that assess the end product. Qualitative methods and instruments are better than quantitative methods and instruments to assess students with autism.

Using standardized testing to evaluate students with autism is an ethical concern. The theory behind standardized testing in schools is that by holding schools accountable for student achievement, the public will be ensured a quality, equitable, education for all students. However, standardized testing does not give an accurate holistic view of the learning that takes place (Sabol, 2013) and the assessment is not always valid (Gross, 2024). Standardized testing creates a creative inequity among students. Standardized testing takes time away from the regular curriculum, and potentially the arts (NAEA, 2024). Loss of instructional time in the art classroom impacts student growth and assessment (NAEA, 2024). Standardized testing encourages “teaching to the test” and as a result, the US student population, as a whole, is showing a decrease in creativity (Sabol, 2013). Often when students do not perform well on

standardized tests, they are pulled out of art class for remedial work in another subject. Standard-based learning and testing in public schools contradict the subjective nature of art.

### **Recommendations**

The research shows that students that are neurodiverse would like teachers to know what their disabilities are and help create environments to help them be more comfortable and succeed (Larsen, 2018). Despite their desire for the instructors to know this information, they do not always feel comfortable telling them about their disability or requesting information. Therefore, it is recommended that administration within the individual schools implement a school-wide anti-ableism initiative, which appreciates differences in physical and mental capabilities, and different ways of thinking. The initiative would include training, information sharing and practice. Training includes educating the faculty about ableism, neurodiversity, and neurodiverse practices. The initiative encourages IEP teams, classroom teachers, and specialists to work together and share information. Practice includes encouraging projects that are collaborative, open-ended, less competitive, and use non-traditional methods (Wexler, 2020). Educators are encouraged to use neurodiverse-friendly classroom practices, such as using natural lighting, giving seating options, chunking assignments, and allowing for breaks (Larsen, 2018). Administration or classroom teachers could provide activities that would allow students in self-contained classrooms to interact with other students more.

It is recommended that administration become more involved in the inclusion process. Research shows that as of 2022, 1 in 31 children are diagnosed with ASD (autismspeaks, 2025). A training program needs to be developed and provided for all educators, since the inclusion of students with ASD will affect most educators in the school. Additional specialized ASD training is needed for specialists. For art educators, specialized training would include lesson plan

modification, creating assessment tools, and assessment practices, for teaching all levels of students with autism. Administration needs to provide training on IDEA and the IEP process. Administration needs to be more supportive of the art specialists by allowing time to meet with IEP teams and inviting them to join IEP teams. This will help art educators feel more prepared and ensure student success (Begeske et al., 2021; Lowe, 2016).

Art educators should use a method of assessment that is qualitative to assess creativity in students with autism. While Aleksandrovich and Zoglowek (2014), and Jolley et al. (2013) were able to show that children with autism are equally creative as their mental-aged peers, they were not successful in finding an instrument that could successfully quantitatively assess creativity in children with autism, due to the nature of autism and subject matter. Formative, project-based, and authentic assessment models all assess qualitatively, although Gates (2017) and Dorn et al. (2002) offer suggestions to assess qualitatively and quantitatively, if necessary to meet administrative requirements.

The model that this paper recommends for assessing creativity in students with autism in an art classroom setting is the formative model of assessment. The theory of formative assessment is that assessment should occur during the process of creating an artwork, not at the end, for the purposes of learning and modification (Andrade, et al., 2014). Research shows that a formative assessment model is best practice for assessing creativity, students with autism, and students in an art classroom setting (Videira, 2018). Formative assessment theory values the active creative process for learning and growth, for all types of learners and abilities. Qualitative assessment tools that are recommended that are consistent with a formative model, include rubrics and portfolios. Rubrics are helpful to assess students during the creative process.

Portfolios keep artwork that was created over a period of time and are helpful in assessing growth.

It is recommended that further research should be undertaken that follows Wexler's (2022) lead to develop lesson plans that are in-line with a formative assessment model and incorporate the anti-ableism approaches of non-traditional methods, collaborative learning, and assessment criteria that value experience over quality judgements to create safe and non-competitive environments (Wexler, 2022).

### **Summary**

With statistics showing that 1 in 31 children are diagnosed with autism (autismspeaks, 2025), it is imperative that measures be taken to prepare art educators for this future influx of students with autism entering the public school system. Art educators need to be provided with curricula for teaching autistic students in an art classroom setting or be given training and time to create curricula themselves. Administration needs to provide more training and support for art educators.

This is an issue that does not stop at the K-12 level. College instructors need training, too. College students feel like it is challenging to get the individual accommodation they need (Accardo, A.L et al, 2014). Pre-service teachers need more than the one required special education class to be properly prepared for special needs students (Begeske, 2023).

Proper implementation of IDEA needs to be followed. Art educators need proper communication to follow student IEPs. Art educators should be part of the IEP teams for students with autism (Lambert, 2018). Communicating with the IEP team will help art educators feel more prepared to teach students with autism. Art educators need to know and understand the

information in a student's IEP to be able to modify, monitor, and assess a student with autism properly (Lowe, 2016).

Just because a person has autism does not mean that they are not creative. Individuals with autism are creative, and creativity is able to be assessed in individuals with and without autism. The theory behind anti-ableism helps people to understand that just because someone is disabled that does not mean they can or cannot do something because of their disability, (Larsen, 2018). Roth (2018) and Wexler (2020) challenge the notion that individuals with autism are not creative. Roth puts it in perspective when she says that "just like neurotypical peers, artists express themselves in different ways" (Roth, 2018, p.7). This is confirmed by Holt who found that students with autism are particularly creative when working in their area of special interest (Holt, 2024). Researchers have found that students with autism are equally creative as their mental-aged peers (Aleksandrovich, et al, 2014), (Jolley, et al, 2013).

The research shows that quantitative instruments are not ideal for testing creativity or students with autism. Summative models of assessment only test an end product, not the creative process. Summative models, such as standardized tests, are used for evaluation purposes. The purpose of standardized testing is to hold schools accountable for a quality, equitable education for all, but equal does not always mean the same. Standardized tests do not consider the diverse student and teacher populations, different curricular goals, and unequal learning environments. (Dorn, et al, 2002). In inclusive situations, mental age or intelligence could invalidate standardized test results (Gross, 2024). Standardized testing does not consider the learning that takes place in art education such as growth, problem-solving skills and creative thinking skills, and it does not give a holistic view of the learning that takes place (Sabol, 2013). It is

recommended that students with autism should be assessed according to growth, learning, and any IEP goals (Gross, 2024). This is accomplished through qualitative processes.

Qualitative assessments are better than quantitative assessments to assess creativity in students with autism in an art classroom setting. There are various assessment theories that are qualitative in nature, including authentic, formative, and performance-based models. They all share the belief that assessing the process is more important than assessing the end product. Assessment instruments may include rubrics, interviews, and portfolios.

Andrade (2014)'s study assessed the creation process in an art classroom setting. Cevirgen (2018)'s study assessed students with ASD in an art classroom setting. Videira (2018) was the only study to specifically focus on assessing creativity in a student with autism in a classroom setting. Looking at the results from these three studies, along with the information on quantitative assessments, the research that indicates that it is possible for students to show creativity, the research indicates that a formative model of assessment is an appropriate choice for assessing creativity in students with autism, in an art classroom setting. Formative assessment models are successful in assessing the creative process. They have the flexibility to assess students with autism according to their IEP modifications, improving learning and engagement (Videira, 2018). Using formative assessments as part of the creation process, art educators noticed an improvement in student engagement and higher quality of artmaking (Andrade, 2014). Portfolios are frequently used in formative assessments and are helpful in collecting data and showing growth in students with autism (Cevirgen, (2018).

However, Videira's study involved only one autistic student. More studies have to be performed assessing creativity in students with autism in an art classroom setting. Also, studies

should be performed using other models to assess students with autism in an art classroom setting to compare results. Videira notes the lack of literature on this specific topic.

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