Art and Fun Digital Learning for Children with Special Needs

A Case Study on Applying Art as a Learning Technology

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Abstract—Special education always offers a new perspective on the learning method. This is because when working with them, special learning methods are needed to improve the quality of life for children with special needs. Therefore, it requires interdisciplinary exploration in learning activities of children with special needs. In this regard, art appears as one of the disciplines that provide power in interdisciplinary using visual literacies view. This study aims to introduce a fun educational model for children with special needs in school through art and technology. This study uses a case study method on the pattern of education for children with special needs in Indonesia, using exploration about art education theory. The results of the study showed that the education model through art was able to provide a sense of comfort for children with special needs in conducting learning activities in school. Art has a positive impact by giving children a sense of fun while at the same time giving concepts that can improve their development and reduce the disorders. This research provides knowledge for teachers in the scope of special education, about how art can be an effective method when becoming teachers of children with special needs.

Keywords—art education, fun learning, interdisciplinary studies, children with special needs

I. INTRODUCTION

The presence of art education in school institutions is a prove of concern from the government and education experts in Indonesia that include of art subjects into the curriculum as stated in the law below.

"Art and cultural study materials are intended to shape character. Students become human beings who have a sense of art and cultural understanding. Art studies include writing, drawing / painting, singing, and dancing which are focused on art and culture [1]."

Art education as a subject in the education curriculum has the same functions and weights as other subjects. Art education as aesthetic education, provides a balance of logical-rational education, and ethical-moral education. Plato in Herbert Read's ‘Education Through Art’ said that “art should be the basis of education”[2]. The thesis was supported by Aristotle, who said that art was the subject needed to educate [3]. This is in accordance with the definition of education which is a conscious and planned effort to create a learning atmosphere and learning process, so the students actively develop their potential [4]. In accordance with one of its functions as a learning medium, art provides complex learning material for children whose results can be developed in other fields, including education for children with special needs.

Before widely discussing about art for children with special needs, it would be nice to see how art has that flexibility. Art is considered as the right media for children with special needs education, because it offers an educational method by playing [5]. The art of inviting children to play with their imagination. In accordance with the law which states that what is meant by the development of art includes the realization of an atmosphere for the growth and development of art appreciation in the context of play and of course ‘having fun’. Therefore, the essence of art education is to prioritize aspects of play in which there are elements of education.

"Art is fundamental in human process ... Art is a dynamic and unifying activity, with great potential for education of children. The process of drawing, painting, or constructing is a complex one in which the child brings together diverse elements of his experience to make new and meaningful whole, he has given us more than a picture or sculpture, he has given us a part of himself: how he thinks, how he feels , and how he sees [6]."

Still in an educational perspective, art is seen as one of the tools or media to provide a balance between intellectuality and sensibility, rationality, and reason, so that humans are ‘human’. Furthermore, art education is also regarded as an educational medium that provides a series of aesthetic experiences that have a profound effect on the development of individual souls. Through art education, internalization of aesthetic experience will be obtained which functions to train high sensitivity. Through this sensitivity, later the child’s mentality is more easily filled with the value of religiosity and manners which also become part of what is called character [7]. In addition, with art education that is closely related to creativity, children are expected to be able to apply art to solve problems in their daily lives.

The education of children with special needs should take into account the viewpoint of 'play and pleasure' [8]. However, most education for children with special needs in Indonesia is only concerned with the element of 'output' only, and rarely pay attention to the 'outcome' of education for children, one of
which is learning by playing. From the explanation above, this paper tries to offer fun learning methods for children with special needs by utilizing the flexibility possessed by art.

Research on the topic of art therapy is largely dominated by the role of art to help overcome problems in the fields of health and psychology. Melinda J. Emery with her research entitled "Art Therapy as an Intervention for Autism", describes and explores in detail how the development of autistic children with images that fit the child development scheme. The study also sought to explore methods for dealing with voice control in children with autism, who often scream when communicating verbally. This study analyzes the shape and color symbols conveyed by autistic children through their paintings and relates them to the improvement in visual communication of autistic children. This research is limited to visual communication, without trying to see the implications of art therapy for the ability of children autism to communicate verbally.

Carl E. Stafstrom, Janice Haviena, Anthony J. Krezinski with the title "Art Therapy Focus Groups for Children and Adolescents with Epilepsy" try to see the effects of art therapy performed on 16 research respondents who suffer from epilepsy. Research shows that the ability to develop creativity represented in pictures is below the standard age for artistic development. Child Development Toward Illness Scale which is used as a measuring tool is used repeatedly but does not show a difference between pre-test and post-test scores. However, all parents of respondents rated positively about the cognitive benefits of participating art therapy.

Research on art therapy that makes it a tool in improving language skills of autistic children is carried out by Chung-Hsin Chiang, Wei-Tsuen Soong, Tzu-Ling Lin, and Sally J. Rogers with the title "Nonverbal Communication Skills in Young Children with Autism". In addition, similar research was also conducted by Annete Marjorie Miller-Jones with the title "The Effect of Music Therapy upon Language Acquisition for Children on the Autism Spectrum Aged 3-8 years". The results show increased speech, progress towards special educational goals, emotional well-being, expressive communication at home and community, and improvement in social skills. The language skills of children before and after participating in music therapy sessions range from nonverbal situations to singing songs, from using gestures to talking three to four words, from using language without pragmatics to make friends, and from saying one to two words phrases to regulate their emotions [9]. Research on family art therapy was carried out by Beth Nemesh entitled "Family-based Music Therapy: Family Therapists' Perspectives" which explained the benefits of collaborative action between music and family therapy. Furthermore, this therapeutic model is able to combine family-based music therapy interventions in the practice of family therapy and family-based education. The dominant difference with the research conducted is in the chosen field of art, where Miller-Jones and Beth Nemesh use music.

II. METHODS

This research is a qualitative study with case study approach because the researcher intends to describe, interpret, and analyze conditions that occur in depth, without changing the facts that occur. Therefore, qualitative research is also referred to as naturalistic research, which is research by looking at the facts in the field as they are. This case study research was conducted in "Peduli Kasih Anak Berkebutuhan Khusus Surabaya" Foundation. The foundation was chosen, because it deals with spatial limitation in this research, which is limited to the city of Surabaya. The research subjects were Attention Deficit Hyperactivity Disorder children named R (male), and T (female) who were 10 years old. Subjects were chosen based on gender, and based on the type of autism disorder they had. The study lasted 6 months, with data taken in 2019. This study uses the viewpoint of art education, and the flexibility of art in relation to education through art, education for art, and education for art. Case studies can be done by conducting in-depth observations with the subject [10]. That is because in the condition of this study, it is not possible to conduct interviews with subjects [11]. Observation includes the subject's behavior and creative process when he learns by applying art technology. The technology in this study explores the ability of art in its position to be an effective learning technology for children with special needs [12].

III. RESULTS AND DISCUSSION

A. Children With Special Needs: The Real Teacher

1) What should Art be in Special Education: Aristotle’s View

Art offers that there is always a way to view objects that are multi-perspective, there is no complete discipline as a whole, and there is nothing that has the final word. Art offers new dimensions of meaning, new forms of logic which have so far been inspired by modern education. It is through art that someone is encouraged to see and hear, breaking through the surface layer of reality. Therefore, an art education curriculum can be classified into a humanistic curriculum that prioritizes human development, not a social curriculum that prioritizes practical results. This is in accordance with the concept of Aristotle who said that the process of forming knowledge originated from sensing which was then processed into an idea that produces a knowledge. Aristotelians explain that humans acquire knowledge from the universe through sensory processes which are then processed into ideas [13]. Departing from sensation, humans perceive everything that exists in the universe, then with abstraction to produce ideas. This process begins when an external object sends a certain form of energy received by the senses. The human mind then brings together the results of sensation from all human senses and gives meaning to objects that are being sensed, which is called perception. Perception then produces sensory images, then the process of imagination takes place. Then there was the formation of abstract and universal ideas or concepts. In accordance with children's art education, where children first do art activities, then feel it, and in the end the child is able to take the concept of what he is doing. Continuing on the
interpretation of the thesis of Plato and Aristotle, the discussion of art as a means of education can refer to several directions, including how it works with children with special needs as one of the complementary aspects of their healing efforts.

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2) Learn from Children with Special Needs

Art that has an interdisciplinary perspective influences the user's point of view as well. In the learning process, the role of the teacher is now nothing more than an information provider, not at the level of an agent of education.

Learning from children with special needs will provide a perspective on gratitude that is currently rarely possessed by adults. Furthermore, when viewed from an educational perspective, learning from children with special needs is able to provide unlimited imagination and pleasure. The point of view is clearly seen when children with special needs are doing the learning process using the playing method, namely by using art assistance. When doing art, children express what they see, remember and experience without any limitations [14]. Children's knowledge is not confined to the definitive concept of adults, but by the freedom of narration that is usually possessed by children. Therefore, the most important aspect in children's learning is: the creative process or thinking process [15]. Furthermore, the historical, social, cultural context and content of the image or artifact will have an advantage over the quality of form. The argument emphasizes the importance of the child's creative process when performing arts. Because in the creative process, there are artistic and aesthetic experiences of children that are externalized into the typical symbols of children [16].

The world represented in the typical imaginative works of children is a fresh world, a reconstruction of human consciousness that the world is like that. Art is not merely a representation of the external world, or as a representation of universal general characteristics of a reality, or an escape from the real world to simply enter the transcendental world [17]. It is a mistake to think of representation in visual art as a simple effort to 'copy' what is 'seen'.

B. Romanticism between Special Needs Education and Art Approach: Children as Artist

Ernst Gombrich in Art and Illusion states that the power of a child as an artist is not to reproduce what is 'there', but to create an 'impression' that we are seeing something that is represented [18]. Even most representations that are similar to life cannot be thought of only as plagiarism. The author follows the provisions which determine how something is represented and uses techniques that require us to see it in a certain way. Children have their own vision to represent what they see and what they think in the painting. Thus, after tracing the development of art thought as a mimic representation of reality or subject expression of reality, it can be concluded that there are six views on what should be realized in art, namely: (1) art is a representation of the scientific attitude to the reality of nature and social reality; (2) art is a representation of the general characteristics of nature and human emotions; (3) art is a representation of general characteristics in nature and humans that are seen subjectively by the artist; (4) art is a representation of the ideal form that is attached to the realm of reality and the mind of the artist; (5) art is a representation of ideal forms that are transcendental; (6) art is a representation of the world of art itself [17]. The above view is entirely in the artwork produced by the child. They work spontaneously, expressively, and certainly are original, which is really the result of their ideas and ideas.

Back to the artistic experience of children. Another thing that should be obtained from children's paintings is about how children process their artistic experiences. Experience in art is categorized into two types, namely artistic experience (act of production) and aesthetic and perception experience [19]. Artistic experience is an artistic experience that takes place in the process of creating artwork. This experience is felt by children when carrying out artistic activities called the creative process. Aesthetic experience is the experience felt by connoisseurs of aesthetic works in the sense of beauty [19].

Enjoyment produced by the beauty of a work of art has a high level of subjectivity [20]. A person cannot enjoy and cannot receive the effects of a work of art if they do not have an interest in the art. This discomfort can be seen in the work of normally repetitive children artwork, there are similarities between work and between children. This is because basically children do not have pleasure in work because of the restrictions on actual freedom which also limits children's imagination and creative ideas.

Schlosberg once revealed that playing can be an effective medium to improve children's stimulus response to the material being taught [21]. The concept of playing in education is called functional pleasure, which is the pleasure that comes from the process, not from the end result. In accordance with the nature of art education, which also considers the process as an important point, because in the creative process, imagination, ideas and ideas of children will emerge and try to be represented in the form of symbols.

The concept of playing in art education will make children become subjects in the educational process. This is because playing is indeed a real child's life. The concept of education by playing makes children have no burden. Art education with
the concept of playing will provide opportunities for spontaneous children to express themselves. Playing is also fun, as is the case with art education for children, one of its functions is as a medium for children's play. In education with the concept of playing, the role of the teacher is as a negotiator or balancer. The teacher in this method returned as a child guide, who is equal to the child. Teachers are not in the front to attract children, nor are they behind to encourage children. Teachers and children go hand in hand, because they are all subjects in their respective assignments.

Playing is a way for children to do nothing, because basically a person does not need certain rules when playing. Playing doesn't make someone stressful. If in labor relations with capitalists, work is considered labor as the only way to survive, then playing is also considered the only way to survive by children. Only by playing, children are able to get lessons that are beneficial for their cognitive development.

C. Case Study: fun learning for special needs

Every child have different needs. Understanding this basic difference is vital to teachers because from this realization they must adjust, in large part, how they teach [22]. Although we cannot change the fact that a child has autism, we can be hopeful that he or she will respond to what we set before him or her in the classroom. Brain-based learning theorists recognize that not all children are neurologically the same. In fact some (probably those with autism) are hardened quite differently [23].

Freedom is an effort to bring out their intelligence. A teacher's need to take time to closely observe and to be clear that any intervention they make will have a positive impact on the play [24]. I became volunteer in “Peduli Kasih ABK Surabaya Foundation”. There are two childrens with Attention Deficit Hyperactivity Disorder; they always throw items around them. Through observation and valid information, R and T have similar syndrome but different needs. It was proven while I showed them two different stimulus—music and video. R gave positive response to music. He listened calmly and enjoyed it. Surprisingly, he responded to orders from me. Through that case, it can be concluded that he prefers to learn through audio.

In the other hand T did not respond to the music, she still throw away things. Nevertheless T gave positive response and interested in the video. She began to imitate what was on the video. So T is part of children who prefer to learn through audio visual. Knowing the needs of each child, I determine what fun learning can I apply to develop fun learning. It is an effort to make them comfortable and facilitate the interaction between in learning process. An initial concern in fun learning was the extent to which children were likely to learn content knowledge by participating in open ended and interest driven play[25a]. Play is important for building social competence and confidence in dealing with peers, a life skill that is essential for functioning in school [26].

R likes music. I taught him to know body part with song, and other material can be taught through song and motion. Music therapy group improvisations are a powerful tool for working with groups of adolescence on the autism spectrum who do not communicate successfully using verbal means [22]. Music therapy can also offer safety because of its complementary relationship with words, with the music oftentimes containing the more conflicting emotions that may not be easily expressed through language [27]. For T case, I taught her story telling methods with picture from book story. Children's picture book stories play a foundational role in the lives and education of young children in several ways. There is, first and foremost, the sheer delight that children take in them, whether reading or being read to, and the fact that these activities are generally regarded as an essential preparation for the child’s transition into literacy and future school success [23, 24].

Very few teachers have had preserved training to learn the theories and strategies they will need to use with a child on the autism spectrum. Likewise, most of them have had no (or limited) first-hand experience of actually teaching children with autism, and so they must learn through trial and error [23]. The "coercive" tests or assessment is not proper ways to understand their intelligence, and must be unfavorable for their mental health. Therefore we can give them fun learning and look for methods that are suitable for the given condition—the development and application of fun methods in the next meeting: for example learning that gives new experience. Every child has a different way to be smart through words, numbers, pictures, music, expressions, nature, social interaction, or self-understanding [30]. This design involves a change in the very set of a value system that respects multiple voices regardless of their backgrounds and that embraces voices of people with special needs [31].

There are steps in applying the fun learning. The variety and complexity of needs of children with autism require us to understand our own material. The methods should not be threaten them. It is done in fun way without any pressure. Student participation is something that is highly considered. Building mutual understanding is the key to accomplish this learning process. Marilyn in “Play and Learning in Early Childhood Setting” suggests that children enact the stages of human evolution through play. Play has also been explained as an opportunity for the safe expression of pent-up emotions [26].

Pedagogic learning is successful when the student is able to discover new things through the learning process. No matter how small the student's understanding is, pedagogue is still worthy used as an evaluation of the development of further learning. A student will be more developed by given the belief that they can do it. And they need positive support for every achievement. The challenge for pedagogue is then to re-think some of the conventional pedagogical approaches and methods mainly based on determined structures or curriculum through the insight coming from the play structure. Inspired by the logic of fantasy play, pedagogues have the opportunity to plan pedagogical processes and organize activities in more flexible and creative ways [32].

D. The Protagonist Role of Art in Fun or Play Learning

Art is a human activity consisting in this, that one man consciously by means of certain external signs, hands on to
others feelings he has lived through, and that others are infected by these feelings and also experience them [33]. Fun learning can increase children's self-confidence, and art is one of the fields that can be developed in it [25]. Pleasure, beauty, play, and emotional stimulation are all closely connected with art and our experience of it and all of considerable value. The arguments shown thus far support the idea that art is valuable as a source of understanding [18]. Art is a space of freedom that can arouse students to express feelings that are difficult to express through language. Fun learning is not only playing but is expected to be able to convey material through art. The arts are an important part of human life and culture. They attract a large measure of attention and support. The value of art is necessarily connected with pleasure or enjoyment, because, they argue, to say that a work is good is just the same as saying that it is pleasant [18]. Through art we can also convey messages, communication and expression media.

In a perfect world, all teachers would have the ability, the energy, there sources, the enthusiasm, and the creativity to teach all children, including those with autism [30]. In reality, this is rarely the case. I am a firm believer that, with rare exceptions, teachers truly want to help children succeed, yet I was confounded by the fact that some were far more effective than others, who ultimately master this job are those who can combine theory with practice in a creative, intuitive way. Their sense of timing, control, and approach with children is always astonishing. Many of them may be “book smart,” but all of them are artists. Simply put: the atmosphere, tempo, and organization of their classroom is a haven for a child with autism [23].

It is general assumption that art teachers are considered insignificant. Most of people see children's intelligence only arises from science or mathematics. Instead, art can also be developed to increase cross-disciplinary intelligence. Art is also very closely related to culture. Experience of art does not take place in a cultural vacuum. A complex array of institutional and cultural conditions must be in place to make possible the apprehension of conceptual art as conceptual art [33]. Nevertheless, no two teachers are the same, and even if given identical instructional materials, each teacher teaches in a manner that reflects his or her personality, strengths, and interests. This is why educational research becomes difficult. The teacher and students are uncontrolled variables. The way a teacher teaches directly affects the educational experience of the students [34]. The development of fun learning methods is very important in supporting the sustainability of the learning process for children with special needs, although it is agreeable to assume that art teacher has different expertise. Expertise in this matter is not only about practical artistic or skill matters, but also about how an art teacher is able to make art as a medium of therapy for children with special needs, as a means of interdisciplinary between art and psychology. Interdisciplinary way of working brings together two or more different disciplines in a more complex manner [35]. This way of working allows for a more collaborative and integrative approach to practice. This can include transferring or borrowing concepts or methods from other fields, hybridization between disciplines, or even the creation of new fields of research and practice by combining two or more disciplinary approaches.

IV. CONCLUSION

The education model through art was able to provide a sense of comfort for children with special needs in conducting learning activities in school. Art has a positive impact by giving children a sense of fun while at the same time giving concepts that can improve their development and reduce the disorders commonly experienced by children with special needs at school. Learning methods for children with special needs cannot be forced, each has different needs, even through trial and error to find the right needs, but it is a way to form enjoyable learning. With fun learning, it will open opportunities so that they can develop what is inside them they must. This research provides knowledge for teachers in the scope of special education, about how art can be an effective method when becoming teachers of children with special needs.

REFERENCES


