Đorđević, N. (2023). Developing methodology for identifying giftedness in visual art expression domain in preschool age, *SCIENCE International journal,* 2(4), 173-179.
doi: 10.35120/sciencej0204173d UDK: 373.2.011.3-052.45:7-028.22

DEVELOPING METHODOLOGY FOR IDENTIFYING GIFTEDNESS IN VISUAL ART EXPRESSION DOMAIN IN PRESCHOOL AGE

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Abstract: Among professionals dealing with giftedness, one of the commonly accepted purposes for identifying giftedness is providing gifted with adequate pedagogical support, optimal nurturance, cognitive growth, development and opportunities for self-fulfillment. It is also recommended for researchers to choose one position in which giftedness would be understood and setting precise criteria for defining giftedness. In this article, we are interested in identifying giftedness in the domain of visual art expression among preschool children. Some of the general criterions for identifying gifted children include creativity, precocity, high intrinsic motivation, individual speed and approach to learning. The excellence criterion, the rarity criterion, demonstrability criterion, the productivity criterion and the value criterion are given as factors within the Pentagonal theory for identifying the gifted. When it comes to the visual art giftedness as domain-specific giftedness, realm of production is most readily apparent distinction between gifted and non-gifted children. It is presented in children's artworks. This considers on the one side a child reaching the level of relatively realistic representation in early childhood, and on the other side it is child's advance in experimentation with form, color, line, composition and other aesthetic properties of a drawing/painting. While having these sets of characteristics of artistically gifted children, we faced the problem in lack of standardized or generally accepted or recommended instruments for this process. Being in this position, we approached developing methodology - procedures, research techniques and instruments, relying on the recommendations given by professionals dealing with artistic development and art giftedness theoretically and through practical research. This methodology, as well as the results achieved through implemented research are presented in the article. With the sample of close to 350 preschool children in our local community, we were able to identify visual art giftedness in around dozen preschoolers, proving our instruments and procedures efficient enough. On the basis of these results, we can further work on improving and refining this methodology reaching as many artistically gifted children as possible, striving to support their giftedness.

Keywords: giftedness in visual art expression, identifying giftedness, preschool age children.
Field: Social Sciences and Humanities

1. INTRODUCTION

We start our research of the term giftedness, referring to Sternberg and Kaufman who give extensive elaboration of different theories regarding giftedness, separating them into four "waves" prior to its modern conceptions (Sternberg and Kaufman, 2018). According to these authors, modern conceptions of giftedness, being a result of evolution of previous ideas, emphasize external factors over internal ones in explaining the talent-development process and also put focus on the goal to identify and nurture specific talents (Sternberg and Kaufman, 2018: 36). Monks and Katzko make distinctions between four main groups of definitions of giftedness, too (Monks and Katzko, 2005: 187). Also, when defining this concept, Renzulli suggests starting from the purpose for that defining since "the way in which one views giftedness will be a primary factor in both constructing a plan for identification and in providing services that are relevant to the characteristics that brought certain youngsters to our attention in the first place" (Renzulli, 2005: 248). What Renzulli, himself, states as purpose for this is to "provide young people with opportunities for maximum cognitive growth and self-fulfillment" on the one side and "increasing society's reservoir of persons who will help to solve the problems of contemporary civilization by becoming producers of knowledge and art rather than mere consumers of existing information" on the other (Renzulli, 1999:7). Identification of giftedness in early childhood is important in order to provide child with optimal nurturance and development (Heller and Schofield, 2008: 104; Kreger Silverman, 2018: 183). Initiated and encouraged by theoretical research, current trends in gifted education are becoming increasingly turned toward educational practice and resources needed to support this population (Čolakov, 2022: 32).

In our specific case, the long-term goal is to provide educational and developmental support to preschool children in our local community who demonstrate high abilities in visual art expression and whom we may consider gifted in this domain. In order to do so, the first step is to identify those children.

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The problem is that there are no globally developed and generally accepted tests for identifying artistic giftedness. Therefore, the main goal of our research considers development and examination of possible methodology – instruments and procedures - for identifying giftedness in visual art expression in early childhood.

To approach our research appropriately we first need to define concept of giftedness in early visual art expression. We choose to build our definition on the basis of Renzulli's Three-Ring Conception of giftedness which explains it as an interaction between clusters of above-average ability, task commitment and creativity (Renzulli, 1978:184). Author also distinguishes two types of giftedness – schoolhouse giftedness and creative-productive giftedness (Renzulli, 1999:8). Therefore, considering our area of interest, we can say that the giftedness we are interested in, is by Renzulli's definition a creative-productive one – it describes those aspects of human activity that develops original thought and products (Renzulli, 2005: 255). Also, as we are focused on the specific domain of visual art expression, we are relying on the concept of domain specific giftedness, introduced firstly by Howard Gardner's theory of Multiple Intelligences (Gardner, 1983, 2004, 2011). Researchers who accepted this conception of giftedness emphasize specific areas of aptitude which leads to the focus in acquiring appropriate development in a specific domain (Kaufman and Sternberg, 2008: 75, 76). Ellen Winner specifically discusses art giftedness referring to a domain specific giftedness (Winner, 1997).

When considering art expression in early, preschool age, there must be an understanding of certain phases or stages of the child' visual-art expression development prior to giftedness identification. Golomb suggests that stage-like progression of representational development can be used as a convenient devise when considering orderly changes characteristic for all children's drawings (Golomb, 2004: 6). Having in mind that children's visual representation depends on time and place of the origin and that it reflects visual models and values of the society children grow up in, there is one generally accepted schema of representational developmental stages in the western societies. These stages also reflect universal development of children's cognitive and pshycho-motor skills. Stages have been determined mostly on the basis of two-dimensional representation – children's drawings and it starts from the stage of scribble (about age of two), stage of transition to the shape, through the stage of representational shape or schematic drawing (age of three or four) to the stage of differentiation of forms and early graphic models or the preconventional period (about six or seven years old) (Golomb, 2004; Winner, 1993). A realism in children's representation "was assumed to distinguish the work of all artistically gifted children" for a very long time (Winner, 1997: 352). Clark and Zimmerman proposed that artistically gifted children would move from lower to higher levels of achievement at a more rapid pace than the average children (Clark and Zimmerman, 1986: 119). Another characteristic of artistically gifted child considers advance in experimentation with form, color, line, composition and other aesthetic properties of a drawing/painting even when the characteristic of representation agrees with the stage characteristics (Winner, 1993: 33). Realm of production is most readily apparent distinction between children gifted and non-gifted in art (Rosenblatt and Winner, 1988: 12; Heller and Schofield, 2008: 99). Other set of characteristics that are usually being linked to children gifted in art are fluency of imagination, ideas and expression, highly developed visual memory, visual sensibility and sensitivity to art media and technical control as well as a high degree of self-identification with subject matter (Kay and Carroll, 2009: 50; Clark and Zimmerman, 2004: 20, 21). Generally speaking, gifted children have a richer visual arts language and better perceive the visual and compositional elements (Brajčić and Kuščević, 2019: 24).

Apart from domain specific criterions, factors for identifying artistic giftedness in children should include: creativity (Renzulli, 1978; Heller and Schofield, 2008; Sternberg and Kaufman, 2018;), precocity (Heller and Schofield, 2008; Kaufman and Sternberg, 2008; Winner, 1997; Von Karolyi and Winner, 2005), task commitment (Renzulli, 1978; 2005; Clark and Zimmerman, 2004; Kaufman and Sternberg, 2008), high intrinsic motivation (Csikszentmihalyi, 2014; Kaufman and Sternberg, 2008; Heller and Schofield, 2008; Sternberg, Jarvin and Grigorenko, 2011; Monks and Katzko, 2005; Clark and Zimmerman, 2004), individual speed and approach to learning (Heller and Schofield, 2008; Pfeiffer and Blei, 2008; Sternberg, Jarvin and Grigorenko, 2011; Von Karolyi and Winner, 2005; Winner, 1997). Pentagonal theory for identifying the gifted separates criterions into five categories: (Sternebrg, Jarvin and Grigorenko, 2011: 2-6).

With no precise and scientifically defined instruments to measure artistic ability, it is claimed that identifying artistically gifted still comes mostly to the knowledge of the domain, personal judgment and intuition than to a scientific approach (Clark and Zimmerman, 2001: 104-114). Some authors propose "authentic (non-standardized) evaluation methods" such as observation techniques as a research methodology having in mind that they are based on primary data – student work – rather than on secondary data – student performance on a test (Madeja 2013: 20). It is also recommended to use multiple criteria in

this process that may include both general ability measures as well as domain-specific criteria (Kay and Carroll, 2009: 50). Parent and teacher nominations are also considered very important tools in identifying artistic giftedness (Heller and Schofield, 2008: 99; Renzulli, 2005: 271; Pfeiffer and Blei, 2008: 179), as well as performance-based assessment, authentic assessment, portfolio assessment, and dynamic assessment (Clark and Zimmerman, 2001: 108; Pfeiffer and Blei, 2008: 182; Von Karolyi and Winner, 2005: 384). One of most recognized and used instruments for assessment in the field of visual art is Clark's drawing ability test (CDAT), based on the work sample technique. It considers all participants working on the same task the same amount of time, with the same materials and instructions in order to compare student performance. This approach provides basis for analyzing and comparing children's art development more than an examination of different products rendered in a variety of media (Clark and Zimmerman, 2001: 109). There are also results that show EPoC test of potential creativity to be appropriate for children aged five and six years but it was not confirmed whether the test is adequate for diverse artistic types of children (Kirinčić et al, 2019: 142). Drawings have been used often in research because they are the easiest mode of visual arts expression to assign, administer, and evaluate as well as they have been recognized as basic to expression in all art forms by a number of research professionals (Clark and Zimmerman, 2004: 25). Preschool teachers may lack knowledge and experience on utilizing specific instruments (such as tests) for identifying artistic giftedness (Đorđević, 2020: 111), which is why professional researchers need to be involved in this process.

2. MATERIALS AND METHODS

In this section we will present methodology – procedures, research techniques and instruments we developed and implemented in the process of visual art expression giftedness identification within preschool children in our local community. The research took place in 2023.

As we stated previously, our goal was to develop methodology which could be efficiently and effectively applied in the process of identifying visual art giftedness in preschool age. In accordance with results of theoretical research presented above and relying on other researchers' recommendations, we concluded that our methodology should consist of: 1) teacher nomination; 2) art production ability assessment; 3) behavior assessment.

1. For the teacher nomination we constructed a uniformed nomination sheet with a checklist. It was distributed to all preschool teachers working with preschool age children in kindergartens in Jagodina. Prior to their involvement in the procedure, preschool teachers attended a short training on how to approach nomination. Nomination sheet consisted of following criteria: A child a) prefers drawing/art activities over other activities; b) demonstrates higher developed visual representation skills compared to the age expectance; c) masters new art media with ease; d) often and willingly experiments with different and new art media; e) shows great excitement, interest and motivation in participating in art activities; f) is persistent in coping with art problems and media challenges.

2. In order to assess art production abilities, we created a four-task art work test that was completed by all children from the research sample. Test was developed through modification of Clark's Drawing Abilities Test (CDAT, Clark and Zimermman, 2001; 2004) and Experimental program for assessing aesthetic education in primary school (Kraguljac and Karlavaris, 1970). Drawing/painting tasks targeted specific characteristics of visual art giftedness in a realm of production. We developed assessment charts for all of the four tasks. In each artwork, we assessed 5 relevant indicators of giftedness with grades 0 – 2 (0 standing for there is none, 1 for partially present indicator and 2 for absolute presence of indicator). Therefore, maximum grade for all 4 artworks could be 40. In order to reduce the risk of subjective assessment, we engaged two art education professionals in the assessment of artworks, applying method of inter-subjective appraisers' agreement. The first step of assessment considered elimination of works that evidently manifest average characteristics expected for the representational developmental stages. The second step of the assessment considered calculating of grades in regard to each indicator. If all indicators were present in one child's drawings with minimum 8 points per 1 drawing/painting (32 points in total) in the assessments of both appraisers, without any indicator being graded with 0, that child could be considered gifted in the domain of visual art.

With the first task we targeted precocity in drawing developmental stage. With theme "Playing with my friends", task considered drawing of human figures in motion which enabled assessment of figure representation abilities. Indicators considered: 1) human figures are presented with accurate characteristics, proportions and details; 2) there is a clear distinction between individual figures presented; 3) human figures are presented in non-static positions; 4) the composition is original; 5) the theme is

answered by rich and vivid visual expression.

The second task assessed children's abilities to represent spatial relations in a drawing through a theme "My favorite playground", also relevant to precocity in the drawing developmental stage. Indicators considered: 1) non-linear spatial representation of motives; 2) diverse choice of motives and forms; 3) clear distinction between different sizes and positions in space represented; 4) characteristics of represented objects correspond to those in reality; 5) the theme is answered by rich and vivid visual expression.

The third and the fourth tasks both tested children's abilities to apply newly introduced art media and technique. Participants were introduced for the first time to chalk pastels and their specific expressive characteristic in painting. This introduction was intentionally scheduled for the third testing session and not repeated during the fourth task. The reason is testing children's ability to apply in the future something they were introduced to in the past.

In the third test, children were asked to make copy of one of Monet's "Water lilies" (1906) as precise as possible in composition, color and shapes. It enabled us to assess children's visual memory and visual sensibility. Indicators considered: 1) recognizable composition of the original artwork represented; 2) art elements correspond to those from the original artwork; 3) art technique is used properly; 4) aesthetic characteristics of art technique are used throughout the all work; 5) task-commitment is evident in the work.

The fourth task asked children to illustrate "The story of a tailor crab" (famous children story by Serbian writer Desanka Maksimović) using chalk pastels. Purpose of this task was to assess children's fluency of imagination, ideas and expression, while also assessing their ability to implement newly met art technique. Indicators considered: 1) a painting as evident illustration of the story; 2) vividly depicted characters from the story, with rich and colorful details; 3); original art composition; 4) successfully applied art technique; 5) task-commitment is evident in the work.

Testing lasted four weeks, conducting one test a week. Children were given freedom to choose if they will participate in the proposed art activities. Time limit for each art activity was 20 minutes.

3. Behavior assessment was implemented through observation technique, using observation sheet. Checklist in the observation sheet included following criteria: a) intrinsic motivation (a child does not need teacher's incentive to participate in the drawing activity; b) task commitment (a child is focused and committed to solving art problem without being distracted by external factors); c) persistence (a child is not being discouraged by obstacles and "mistakes" during the activity and uses all the time they have to complete their work). Observation was done by trained staff members, 13 of them in total, each responsible for observing one preschool group during all four tasks.

The research sample included all children attending preschool program in the city of Jagodina in Serbia. With 7 kindergartens in the city there were 13 preschool groups with 367 children total.

Primary data for identifying giftedness were children's artwork and the primary method was assessment of children's art production abilities, implemented through inter-subjective appraisers' agreement. Teacher nominations and behavior assessment were used as supplementary methods.

3. RESULTS AND DISCUSSIONS

Throughout our 4-week testing, a number of children were absent from some or all tests, which resulted with the total number of 1.214 children's artworks collected for the assessment. There were no children who refused to participate even though a number of children worked on their artworks for a very short period of time. The first phase of art production ability assessment – evaluation, resulted with most of the children's artwork being eliminated from the further assessment, since they clearly demonstrated all characteristics expected for the representational developmental stage - almost 90 percent of drawings and paintings were eliminated. That left our appraisers with the set of around 20 drawings per task for the assessment and grading.

The first task was answered by 312 children, 291 drawings were eliminated. Even though most of children presented high motivation in participating in the drawing task, human figure was dominantly represented according to the expectations – usually static, with very small or no differences between figures represented, with not much correspondence to the realistic proportions. Compositions in drawings were primarily basic, with figures arranged in line near the edge of the paper. There were 21 drawings showing more distinction between different figures in details and positions, with tendency to represent a specific movement or dynamic situation. Out of these 21, 13 drawings received grades from 8 to 10 by both appraisers.

In the second task, there were 298 children participated, 283 drawings were eliminated. There

were 15 drawings which in smaller or higher degree represented non-linear spatial composition with clear distinction between different sizes and positions of motives in space represented. These drawings also demonstrated a certain degree of correspondence of representations to the real characteristics of objects while the theme was answered with vivid visual expression. Comparing assessments of both appraisers, there were 11 drawings graded with points from 8 to 10.

Total of 281 children participated in the third task, which is the smallest number in the assessment. After eliminating paintings which showed only characteristics expected for the developmental stage, there were 18 paintings for the appraisers' assessment. We have to point out that the process of elimination in this task was the most demanding having all children being highly motivated by the new art material and the theme of the work. Most children demonstrated task-commitment and presented very vivid, colorful and expressive paintings as result of children's enjoyment in the play with interesting effects of chalk being smeared and colors mixed over the paper. However, only small number of children did really answer the task. Finally, we reached this number of 18 paintings showing clearly recognizable composition of the original Monet's painting with art elements corresponding to those from the original artwork and with art technique used properly throughout the all work. From this number, 10 paintings received 8 to 10 points from both appraisers.

In the fourth task, there was the smallest number of artworks chosen for further assessment, since the technical part played the biggest role. Children mostly approached using pastels in a manner of a pencil instead of a manner of painting material. It resulted with linear drawings, which was opposite to the request of using pastels pigments to spread it, mix and color the illustration. It showed just how relevant this criterion of understanding and mastering new art media is to assessing giftedness in art domain. We took in consideration the fact that a number of children participating in this task was absent from the previous term when painting with pastels was described in detail, which lead to their lack of knowing the art technique specificities. In the end of the assessment process, after eliminated 309 paintings out of 323 collected, our appraisers received 14 paintings to individually assess. Regarding the aspects of illustrations presented, 8 artworks received 8 to 10 points for presenting a painting that is evident illustration of the story with vividly depicted characters from the story, with rich and colorful details, demonstrating original art composition with successfully applied required art technique.

In the end of the inter-subjective appraisers' agreement, we cross-compared assessments and names of children behind the artworks graded with points from 8 to 10. We reached number of only 6 children whose all four artworks received grades 8 or higher. There were children who did amazing job in applying new art technique, showing great ability in controlling material throughout the composition but show lower skills in representing distinctive figures and objects and vice versa. This is the reason that lead us to conclude that our primary demand of a child receiving equally high point for all four tasks to be considered gifted was not completely appropriate. In fact, one child who received a total of 20 points for the last two tasks had his first drawing eliminated as average. Examining his work additionally, using teacher nomination and especially behavioral assessment, we all agreed that this child by most criteria demonstrates a very specific giftedness in art expression and should not be excluded from participating in some special programs for gifted. However, the premise that visual art expression giftedness should most likely be demonstrated in both these aspects was proven correct since children whose works received high grades in one group of tasks usually did receive high grades in other tasks, too. Hence, we can say that besides this one case, we did not have other confusing or opposing results.

Teacher nominations have proved to be helpful in confirming results of the assessment of art production ability but we cannot say that we would recommend relying solely on them. The point is that most of preschool teachers nominated in average 5 children from their group (nearly 50 children was nominated). This nomination proved to be result of considering motivation of children and their interest in art activities as the most relevant indicator of giftedness. We did find names of children marked as gifted by the process of artworks assessment in these nominations, which was this confirmation of our results, but other nominated children (when we searched for their names in our assessment materials) did not get more than average points for their artworks and most of them had their artworks been eliminated in the first phase of the assessment. Behavior assessment proved the connection between a complete, in detail elaborated artwork (as a product) and behavioral aspects such as high motivation, task-commitment and persistence is undeniable. In the end it proved to be a good confirmation of the children identified as possessing giftedness in art expression. But, just as we stated for the Teacher nomination, the same we state for this research procedure and instrument, too – it cannot be used alone in the process of identifying visual art expression giftedness. It can only be used as supplementary method.

5. CONCLUSIONS

Our methodology confirmed that characters of representational developmental stage are really strong and dominant in children's expression and that speeding through stages and ability to easily master new art media is rare in this age. Using defined indicators of visual art giftedness in our methodology, we were able to achieve the primary goal. Therefore we can state that identifying visual art expression giftedness is possible with the research procedures and instruments we proposed.

However, we also noted several aspects of our methodology that should be taken into account for further improvement, especially if it was to be applied apart from our local context. First of all, there should be a measure predicted for compensating terms for those children who missed one or few tasks in the primary schedule, especially when it comes to the last two tasks. Another important remark refers to those children who depart from proposed standardized identification indicators in the procedure of the assessment of art production ability. As we saw in our example, there can easily be a child who stands out of the defined norms or boxes in the assessment sheet and all professionals included in this process must be sensitive for such cases, too. We encourage any researcher who would apply our methodology, to have this in mind and approach flexibly to such possible cases.

Finally, we can conclude that the methodology we developed for identifying giftedness in visual art expression in early childhood can be considered effective. It is not finalized, it is still object of improvement but results show it can be applied as a first step in order to identify those children who could benefit from differentiated approach in the domain of art education and provide them with optimal nurturance and development.

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