



VISUAL-SPATIAL INTELLIGENCE OF EARLY CHILDHOOD IN GENDER PERSPECTIVE

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Abstract

This study aims to reveal the description of the visual-spatial intelligence of children aged 5-6 years through drawing based on object selection, use of colors, and lining/scratching that can be interpreted from a gender perspective. This study used a qualitative approach to the phenomenological type, involving observation, interviews, and documentation of children's work. The results of the study show several findings. Children's visual-spatial intelligence in drawing through object selection, color use, and line/scratch creation can be interpreted in a gender perspective. The object selection was what objects are in the picture (humans, buildings, female characters, dynamic objects, superhero characters, and life-oriented natural objects). The color use, namely what colors are used in the picture (dark and light colors). The lines/scratches used are forms of lines produced in drawing activities. The children's visual-spatial intelligence in a gender perspective through drawing activities based on object selection, use of color, and lines/scratches, the overall work of girls has a feminine gender perspective and the overall work of boys in group B3 of the Kindergarten has a masculine gender perspective. The children have a gender-biased perspective, and there is one child who has a neutral gender perspective.

Keywords: visual spatial intelligence, gender perspective

INTRODUCTION

Education for early childhood can be defined as a form of education that emphasizes laying the foundation for growth and development, including coordination (fine and coarse), emotional intelligence, multiple intelligences, and spiritual intelligence (Suyadi, 2015). Every child possesses various intelligences, one of which is visual-spatial intelligence.

Visual-spatial intelligence is related to artistic talent, especially painting and architecture (Yaumi & Ibrahim, 2016). Visual-spatial intelligence, along with verbal and motor skills, is essential for drawing abstract objects and familiar objects (Fastame, 2019). Nunzairina et al., (2023) also explain that visual-spatial intelligence is the ability to imagine images, including color, line, and shape. The spatial intelligence underlying drawing talent has implications for future careers in science (Drake & Winner, 2018).

Drawing is an intriguing capability as it necessitates the coordination of processes involving multiple cognitive and emotional components, such as perception, long-term and short-term memory, spatial processing, motor planning and control, as well as motivation or affective states (Vinter et al., 2018). Furthermore, drawing constitutes a non-hierarchical domain that enables both female and male artists to transcend gender-defined boundaries (Gørrill, 2017).

Moreover, drawing is among the most favored activities for children, irrespective of whether they possess an inherent aptitude for it. Francesco (Loita, 2017) asserts that drawing contributes to individual development by facilitating mental, emotional, creative, aesthetic, social, and physical growth. However, parents predominantly opt to stimulate linguistic and logical-mathematical intelligences rather than visual-spatial or artistic intelligences. This aligns with the assertion by Wijaya (2018) that the right hemisphere of the brain, which processes musical rhythm, imagery, and creative imagination, has not received a proportional emphasis in developmental practices.

If the right hemisphere of the brain is not adequately developed, the affective elements (attitudes or behaviors) and artistic sensibilities in children become blunted (Wiyani & Siswadi, 2018). The optimization of the right hemisphere in Early Childhood Education (PAUD) institutions remains largely neglected, despite the existence of several activities capable of honing children's right-brain faculties,

such as drawing. Drawing constitutes an activity that can stimulate a child's right hemisphere and optimize visual-spatial intelligence in early childhood.

Activities aimed at optimizing children's visual-spatial intelligence from an early age, whether in Kindergarten (TK) or at home, can be implemented through art activities. Research findings by Nunzairina et al. (2023) indicate that children's visual-spatial intelligence can be enhanced through coloring activities. Furthermore, visual-spatial intelligence in children can be cultivated through play, drawing or painting, coloring, imaginative storytelling, decorative projects, and games (Karolina, 2018). However, a majority of parents and kindergarten teachers do not yet comprehend the underlying meaning of the drawings created by children, consequently remaining unaware of any potential anomalies present within the children's artwork.

Beyond facilitating emotional understanding, drawing can also serve as a communicative medium for children to articulate messages and ideas. This underscores the importance of granting children the autonomy to draw according to their own volition. In practice, however, parents frequently dictate children's drawing activities by establishing rules regarding what boys and girls ought to draw. The artwork produced by children frequently represents gender, as seen in family portraits and depictions of their television idols; thus, this can contribute to the gender constructs present within children's drawings (Gumilang, 2016).

Gender differences often present a concern for parents, resulting in children solely receiving stimulation through play that aligns with their assigned gender. Jannah and Sukiman (2018) argue that gender equality encompasses the eradication of discrimination and structural injustice against both males and females; however, this has not been effectively actualized within children's drawing activities. The creativity inherent in children's drawings is inextricably linked to gender structures, and the expressive nature of their artwork will reveal the child's gender identity. The stimulation provided by educators also plays a pivotal role in the formation of a child's gender identity. Activities geared toward the development of spatial intelligence must be facilitated from the onset of early education. Furthermore, teachers, in their capacity as educators, should be attentive to children's learning outcomes.

To ensure that the activity materials delivered by the teacher are more easily comprehended by the children, the teacher must implement specific actions deemed necessary to enhance children's visual-spatial intelligence through creative activities. Teachers play a highly active role in cultivating children's visual-spatial intelligence to ensure that the children remain joyful, are not reluctant, and do not experience boredom during the activity process. This aligns with the assertion by Sapitri (2018) that if children are provided with stimulation for the development of their visual-spatial intelligence, they are capable of producing works that are inherently unique and creative.

The researchers conducted pre-research observations at ABA Perumnas Condongcatur Kindergarten. The researchers discovered that the kindergarten features an extracurricular drawing program held regularly every Wednesday. This constitutes an intriguing phenomenon, wherein the kindergarten is exceptional because the activities conducted therein are balanced in developing the children's right and left brain hemispheres. The kindergarten employs a strategy for developing children's visual-spatial intelligence through drawing. This is evident in the kindergarten teachers who exhibit greater flexibility in accommodating the children's interests in drawing: during drawing activities, there are still children who are unwilling to draw according to the assigned theme, thus the teachers permit the children to draw according to their own interests, and the teachers do not impose gender stereotypes during drawing activities. During out-of-class activities (recess or time spent waiting for pick-up), if children request to draw, the teachers grant them permission to do so. However, during children's drawing activities, gender stereotyping still frequently occurs, wherein children mock boys who draw female characters and utilize the color pink in their drawings.

This research is essential to conduct as it can provide an overview of children's gender perspectives through the outcomes of their drawings. This study examines visual-spatial intelligence viewed from the aspects of objects, colors, and lines within a gender perspective. This is motivated by a preliminary study conducted at ABA Perumnas Condongcatur Kindergarten, which revealed the presence of stereotypes in the selection of objects and the utilization of colors in children's drawings, alongside the ridicule directed at boys when they drew female characters and employed the color pink in their artwork. The children are beginning to exhibit gender stereotypes in their drawings, which consequently renders them gender-biased.

RESEARCH METHODS

The research approach employed in this study is qualitative, utilizing a phenomenological design, conducted at ABA Perumnas Condongcatur Kindergarten, specifically within group B, which comprises children aged 5–6 years. The researchers' rationale for selecting ABA Perumnas Condongcatur Kindergarten as the research site was predicated on the institution's routine practice of conducting weekly activities capable of developing children's visual-spatial intelligence. Furthermore, the rationale for selecting children from group B was that they represent the oldest age cohort and have attained fluency in communication.

Data collection procedures in this study were conducted within a natural setting through semi-structured interviews, observations, and documentation. Interviews were conducted directly during the drawing process. During the interviews, we asked the participants to describe their artwork. The researchers conducted in-depth interviews, transcribed them into text, and subsequently analyzed and categorized the interview results. Observations were conducted to observe visible behaviors during the drawing process that could reflect the subjects' emotional states; these included smiling, laughing, and exhibiting enthusiasm, which reflect positive emotions, as well as displaying anger, frowning, and crying, which are indicative of the subjects' negative emotions.

The data analysis technique employs Interpretative Phenomenological Analysis (IPA), commencing with the observation and examination of the focal phenomenon under investigation, alongside an assessment of various subjective aspects of the subjects' behavior. Subsequently, data exploration is conducted to understand how the subjects construct meaning and attribute significance to the related phenomena. This data gathering is executed through in-depth interviews with the subjects or informants within the study, as well as through direct observation regarding how the research subjects interpret their experiences to others (Elvera & Astarina, 2021). The validity of the data is ensured through methodological triangulation (encompassing observation, interviews, and documentation), and credibility testing via rigorous re-checking procedures, wherein the researchers conduct re-examinations up to five times for each informant. Furthermore, credibility is maintained by comprehensively and systematically organizing the findings, conducting member checks and peer debriefing, and reviewing relevant references to yield results capable of elucidating the phenomena investigated in this study.

RESULTS AND FINDINGS

1. Children's Object Selection from a Gender Perspective

The research findings indicate that the selection of objects in children's drawings is correlated with their sex. The majority of boys opted to draw dynamic objects such as cars, trains, rockets, and robots, whereas the majority of girls chose to draw human figures or female characters such as princesses, castles, and flowers. Each child possesses distinct inclinations in selecting drawing objects. MAK selected objects including a batik clothing store, a train, a tree, and a car. FNP chose objects such as a school, a tree, and a helicopter. RWF opted for objects including a house, Upin Ipin characters, a rocket, a robot, and a car. NMR selected a house, a castle, a princess, and a car as objects. RJD chose objects comprising a house, a tree, a princess, a cow, and a bee.

SZH selected objects consisting of a house, a tree, a princess, and a cow. The objects favored and frequently drawn by the children are also associated with the specific objects they are currently engaged in drawing. MAK, FNP, and RWF exhibited a tendency to select dynamic object items, whereas NMR, RJD, and SZH opted for castle and princess objects. The majority of the children expressed the perspective that boys typically draw dynamic objects and that it is inappropriate for them to draw female characters, whereas girls generally draw flowers and female characters, rendering it inappropriate for them to draw superheroes or dynamic objects.

2. Children's Choice of Colors in Gender Perspective

All informants utilized distinct colors in each of their drawings. MAK used gray and dark yellow; FNP employed brown, dark yellow, and light blue; NMR utilized light blue, yellow, and orange, although there was one drawing that remained uncolored. Differences are also observable in their frequently used and preferred colors. The male children (MAK, FNP, RWF) exhibited a tendency to favor dark colors such as blue, brown, black, and orange, whereas the female children (NMR, RJD, SZH) tended to prefer light colors such as pink, purple, yellow, and orange.

The children's perspectives regarding permissible color usage also exhibited variations. The majority of the informants differentiated between masculine colors (blue, black, brown) and feminine colors (pink, purple, yellow), although a number of children permitted the utilization of all colors

without gender-based restrictions.

3. Children's Visual-Spatial Intelligence in Making Lines/Strokes

All children produced flexible and rhythmic lines and strokes, and their drawings filled the paper plane. MAK frequently created long, thick, straight, and curved lines; FNP produced short, thick, curved, and straight lines; whereas RJD exhibited a tendency to leave portions of the paper plane vacant. Although RJD frequently left the paper plane empty, this child demonstrated positive, active, and confident expressions, thus indicating that leaving the paper plane vacant does not invariably signify psychological issues. In general, the children's lines and strokes demonstrated proficient visual-spatial intelligence and illustrated their positive emotional conditions.

DICUSSIONS

1. Children's Object Selection from a Gender Perspective

The results of this study reinforce the perspective that the selection of drawing objects by children represents social constructs related to gender. These findings align with the assertion by Broadhead et al. (2017), which posits that girls tend to select natural objects such as human figures, flowers, and butterflies, whereas boys prefer dynamic objects such as cars, machines, and robots.

The children also exhibited gender stereotypes in their perceptions. The majority of the children maintained that boys should not draw female characters and, conversely, that girls should not draw masculine objects such as cars or superheroes. This indicates that societal perceptions regarding gender roles have been internalized from early childhood. In accordance with Gumilang (2016), children's artistic creativity frequently represents the gender perspectives that are developing within their environment.

2. Children's Choice of Colors in Gender Perspective

Differences in color selection indicate the influence of gender on children's visual preferences. Boys predominantly utilize dark and intense colors, whereas girls exhibit a preference for light and soft colors. This aligns with Gumilang's (2016) assertion that boys are more inclined toward bold and dark colors, while girls opt for warm and bright colors.

However, the research findings also demonstrate that not all children rigidly adhere to this pattern. Several boys utilized feminine colors, and some girls selected masculine colors. This indicates the presence of a dynamic interplay between children's self-expression and the social construction of gender.

3. Children's Visual-Spatial Intelligence in Making Lines/Strokes

The aspects of lines and strokes indicate that children are capable of expressing themselves effectively visually. Flexible and rhythmic strokes signify emotional balance and developing visual-spatial creativity. In accordance with Putra et al. (2017), lines can serve as indicators of a child's expression and psychological condition. Within the context of gender, the forms of lines and strokes do not exhibit prominent differences between male and female children.

However, the manner in which children utilize the drawing area remains influenced by gender perceptions, wherein boys exhibit a tendency to draw forcefully and broadly, while girls' drawings are more delicate and detailed. Overall, the results of this study demonstrate that children's drawings constitute representations of the social construction of gender. The children have exhibited gender-biased tendencies through their selection of objects, colors, and drawing methods. This presents a challenge for teachers and parents to facilitate a space for freedom of expression devoid of the constraints of gender stereotypes, in order to allow children's imaginations to develop optimally.

CONCLUSIONS

The selection of objects by three children, specifically their choice of dynamic objects based on the rationale that it aligns with their gender, indicates the presence of gender stereotypes predicated on a tendency toward masculine object selection. The object selection by two other children, namely their choice of female figures and life-oriented natural objects justified by gender alignment, signifies the existence of gender stereotypes based on an inclination toward feminine object selection. The object selection by one remaining child, specifically the choice of female figures without drawing gender-related distinctions, denotes an absence of gender stereotypes in object selection, reflecting a tendency toward neutrality.

Regarding color selection, three children opted to utilize dark colors, citing alignment with their gender, which indicates that these children harbor gender stereotypes predicated on a propensity

for masculine color selection. Two other children chose to employ light colors, similarly citing gender alignment, which signifies the presence of gender stereotypes based on an inclination toward feminine color selection. One remaining child selected light colors without making gender-related distinctions, denoting a lack of gender stereotypes in color selection, reflecting a tendency toward neutrality.

In terms of creating lines or strokes, all children executed them proficiently without any concerning anomalies. The outcomes of the children's strokes exhibited no aspects that warrant apprehension. The group B children at ABA Perumnas Condongcatur Kindergarten produced lines utilizing their individual rhythms; however, a number of children left portions of the paper plane vacant during the drawing process.

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