Western European Journal of Linguistics and Education
Volume 3, Issue 10, October 2025
https://westerneuropeanstudies.com/index.php/2
ISSN (E): 2942-190X Open Access| Peer Reviewed

THE EFFECT OF PICTURE SIZE ON PREFERENCE DECISION-MAKING IN 5–6-YEAR-OLD CHILDREN

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Abstract. This study explores how the visual size of pictures influences children's decision-making and preference patterns. Twenty-five children aged 5–6 from five kindergartens in Chinabod, Uzbekistan, participated in a two-phase experiment. In the first phase, they ranked five equal-sized animal pictures from favorite to least favorite. In the second phase, the same pictures were presented in increasing sizes (turtle smallest → crocodile largest). Data were collected on favorite animal choice, time, confidence, and verbal explanations. Results showed that 56% of children changed their favorite when picture sizes differed, but only 12% arranged them by size. Although the panda became the most preferred animal in the different-size condition, most children explained their decisions through emotional reasons rather than perceptual ones. Average decision time increased slightly, and confidence decreased. These findings suggest that while visual salience can influence attention and choice, emotional preference remains the dominant factor in early childhood decision-making.
Keywords: decision-making, visual salience, picture size, early childhood, preference formation.

Introduction

Decision-making in early childhood is a complex process influenced by both perceptual and emotional factors. Previous research has shown that children's preferences can be shaped by visual cues such as color, brightness, or size, which often make certain stimuli appear more attractive or dominant. However, emotional associations and familiarity with objects also play a major role in guiding children's choices.

Understanding how young children balance perceptual salience (what looks bigger or brighter) with emotional preference (what they like or dislike) helps educators and psychologists better interpret children's behavior in learning and social contexts.

The present study aimed to examine whether the size of visual stimuli affects the consistency of preference ranking among children aged 5–6 years. It was hypothesized that children would be more likely to favor larger pictures, but their emotional liking for certain animals would still guide their final choices.

Methods

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A total of 25 children (14 girls, 11 boys) aged 5–6 years were randomly selected from five kindergartens in Chinabod, a small city in Uzbekistan. All children were typically developing and participated with parental consent.

Materials

Five pictures of animals were used: turtle, monkey, kitten, panda, and crocodile.

Each picture was printed in color. In the first condition, all pictures were the same size (10×10 cm). In the second condition, they were printed in increasing sizes: turtle (smallest) → monkey → kitten → panda → crocodile (largest).

Procedure

The experiment was conducted in two phases:

Condition A (Same Size):

Children were asked to arrange the five animal pictures from their most favorite to least favorite. The researcher recorded their choices, decision time, and self-rated confidence on a 1–5 scale.

Condition B (Different Sizes):

After a five-minute break, the same children were shown the same animals, but with pictures of different sizes. They repeated the ranking task.

Observations, times, and confidence scores were again recorded. Children were also asked why they made their choices.

Data Analysis

The primary variable was whether the child's favorite animal changed between the two conditions. Secondary measures included decision time and confidence levels. Thematic analysis of the notes provided qualitative insights into reasoning patterns.

Results

Number of participants:25; age range: 5–6 years (M = 5.6); gender: 44% male, 56% female; changed favorite in Condition B: 14 children (56%); kept same favorite: 11 children (44%); ordered purely by size: 3 children (12%); mentioned size as reason: 1 child (4%); average decision time (same size): 34.8 seconds; average decision time (different size): 37.6seconds; average confidence (same size): 4.4/5; average confidence (different size): 4.1/5; most popular favorite (same size): panda, kitten, turtle (6 votes for each); most popular favorite (different size): panda (10 votes); least popular in both cases: crocodile.

Statistical Summary

56% of children changed their favorite animal when sizes changed.

Only 12% ranked pictures according to size, and 4% mentioned size as a reason for choice.

Decision time increased by approximately 8%, and confidence decreased by 7% when sizes varied.

Despite being the largest picture, the crocodile was the least preferred; most children stated they "didn't like it."

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Discussion

The present study investigated how preschool-aged children (5–6 years) make preference-based decisions when presented with visual stimuli of varying sizes. The results demonstrated that over half of the participants (56%) changed their favorite animal when the image sizes were altered, even though the content of the images remained identical. While the change in picture size led to minor increases in decision time and reductions in confidence, most children (88%) still did not consciously acknowledge size as the determining factor. Instead, their explanations—such as *"I don't like it"*—suggested an emotionally driven decision-making process.

These findings align with prior literature emphasizing the predominance of affective reasoning and perceptual salience in early childhood. According to Piaget's theory of cognitive development, children in the preoperational stage (ages 2–7) tend to focus on one striking feature of an object, such as size or color, when forming judgments (Piaget, 1952). In this study, the larger images may have unconsciously drawn children's attention, even though their verbal justifications reflected emotional preference rather than logical reasoning. This interplay between emotional salience and visual attention illustrates how early learners balance affective and perceptual cues during decision-making.

Moreover, the tendency for most participants to reject the crocodile, despite its large size, underscores the role of emotional valence over perceptual dominance. As children's conceptual knowledge and emotional associations develop, they begin integrating *how they feel* about an object into their evaluative judgments. This supports Vygotsky's sociocultural theory, which posits that meaning-making in early learning is mediated by emotion, experience, and social interaction (Vygotsky, 1978; Holzman, 2009).

From an educational perspective, these results suggest that young children's choices are not purely aesthetic or cognitive but deeply tied to emotional responses. Visual design elements in early learning environments—such as book illustrations, posters, or educational games—may subtly guide children's preferences and attention, even without explicit awareness. Teachers and curriculum designers should therefore consider how visual hierarchy (e.g., size, brightness, or placement) interacts with emotional comfort when presenting new learning materials (Callaghan & Corbit, 2018; Denham, 2018).

Conclusion

In summary, the current research highlights the nuanced relationship between visual perception, emotional preference, and decision-making in early childhood. Although size variations influenced many children's choices, their explanations revealed that emotional liking remained the core factor. This finding demonstrates that affective evaluation precedes analytical reasoning during early cognitive development (Denham et al., 2012; Gopnik, 2020).

Future studies could expand on this by including eye-tracking or reaction-time measurements to quantify attention shifts more precisely, or by exploring how repeated exposure modifies emotional associations with disliked stimuli. In

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educational practice, recognizing that preschoolers' decisions are simultaneously visual and emotional can help teachers design environments that promote engagement, empathy, and curiosity rather than overstimulation.

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