

Investigating Drawing and Instructional Strategies for Children With Low Vision and Multiple Disabilities in the Scribbling Stage

Bin I¹

Yu-Wei Lin²

Summary

This study investigates the drawing characteristics of children with low vision and multiple disabilities, and proposes instructional strategies for these children during the Scribbling stage. Existing research has highlighted the close relationship between children's drawing and cognitive development, noting that visual impairments can lead to delays or even stagnation in drawing development. Visual arts education is often overlooked in the field of visual impairment education. However, art education, even drawing lessons, can offer a wide range of positive benefits for individuals with visual impairments, including improvements in artistic expression, observational skills, imagination, and self-confidence. Previous studies have also provided empirical instructional strategy recommendations for the drawing education of blind and low-vision children and adolescents. However, research focusing on children with low vision and multiple disabilities is limited. This study explores this topic to fill the knowledge gap through long-term instructional research.

The participants were two children with low vision and multiple disabilities, both enrolled in specialized institutions catering to visually impaired students. Both had little or no drawing experience. Participant K12s8 was a five-year-old male, diagnosed with epilepsy and additional physical disabilities, and was attending Kindergarten Level 1 (K1). Participant G23s9 was a nine-year-old male with severe hearing impairment, who had recently undergone auditory enhancement

¹ Professor / Department of Design, National Taiwan Normal University

² Graduate Student / Department of Fine Art, National Taiwan Normal University

surgery, currently in the second grade of elementary school. The research method followed an action research approach, and the teaching process involved a combination of physical observation, shared reading of picture books, creative games, and multi-material drawing activities. During the teaching process, K12s8 and G23s9 produced 55 and 244 scribble drawings of various sizes, respectively.

Following the instructional period, the changes in the participants' drawing characteristics and other aspects are as follows.

The participants quickly progressed from Disorderly Scribbling to Named Scribbling but stagnated at this stage; they were evidently behind typical low-vision children. For the participants, waves, spirals, some closed shapes, and other more complex types of scribbling combinations were challenging. They could not independently draw advanced scribble combinations.

The connection between color and naming shifted from subjective to objective. Their naming of shapes followed a similar pattern, indicating the emergence of rational and objective observation. Due to the abstract nature of the images, the participants frequently changed the names of the scribbles. The change in their naming criteria showed a shift in their logic of categorization.

The detailed developmental sequence of their scribbling stage largely aligns with the developmental theories of Lowenfeld & Brittain (1987), Matthews (1983, cited in Golomb, 1992), and Kellogg (1970). It also corresponds with the Differentiation Law of Arnheim (1974) and Golomb (1992).

As the drawing instruction progressed, the participants' motor control became noticeably more stable. Due to the educational interventions, they developed diverse motor control abilities for creating different forms of scribbling. Their attention spans improved significantly, increasing their focus from one to 10 minutes. When the teaching content was sufficiently varied and engaging, they could maintain focus for an entire class.

Through the instructional process, the participants quickly established the "concept" of drawing and demonstrated a desire for creative expression. They also began to experience the intrinsic pleasure of artistic creation, similar to that of typical-sighted children. The drawing process triggered motivation for verbal expression, providing opportunities for practice and communication. As the drawing instruction continued, the participants developed a noticeably richer vocabulary and more complete sentence structures in their conversation.

The researchers' recommendations for instruction strategies for children with low vision and multiple disabilities during the scribbling stage are as follows:

1. Design course activities and objectives based on the children's actual cognitive and drawing development stages, rather than based on age.
2. Before teaching, it is necessary to set overarching goals and establish a priority order for each sub-goal. This allows for flexible adjustments during the teaching process.
3. Drawing performance should focus on the differentiation of line forms and the differentiation of structure.
4. Teachers should be familiar with the details of drawing development theories in order to evaluate teaching effectiveness and adjust instructional strategies accordingly.
5. It is essential to understand that the verbal expression in scribbling is a process in which children combine visual forms with linguistic meaning.
6. Careful observation and attentive listening to the drawing process and the details of the artwork is critical to understand the content and meaning of the scribbling.
7. Encourage the utilization of residual vision, in conjunction with other sensory modalities, to enhance perceptual observation and exploratory engagement.
8. Provide timely intervention and assistance to enable color learning to develop naturally.
9. Provide different materials to stimulate various drawing behaviors and outcomes.
10. Guide children's existing behaviors to combine with meaningful drawing outcomes.
11. Encourage children to connect visual forms with words, sounds, touch, and movements to create meaning.
12. Effectively integrate drawing and dialogue into "gamified teaching".
13. Role-playing can train children's empathy and imagination, while also increasing the enjoyment of learning to draw.
14. Appropriately use picture books to enrich the visual database of visually impaired individuals and stimulate drawing motivation.
15. Expand the content that the book can convey when children fixate on the same book.
16. Attract children's interest with diverse and lively stimuli to reduce their fixation behaviors.
17. Increasing opportunities for others to understand the child's works can enhance positive feedback interactions and increase the child's motivation for drawing and verbal expression.
18. Art education should assist children's multi-faceted growth through enjoyable drawing activities.