

Looking in the mirror

Preschool children often show the beginnings of writing skills in their drawings, with lines, letters and words among houses and trees. But mirror writing is another matter. *Margarete Rettkowski-Felten* considers the phenomenon as part of preschool literacy – and how aesthetic education can help children through this phase



Mirror writing, where letters and words are formed in the reverse of the natural way for a given language, is an amazing and outstanding phenomenon.

In preschool children drawing and writing are not clearly separated: lines become structures, similar to letters. Signatures are drawn, roughly and awkwardly. Letters may tumble, be inverted or contorted. Children experiment freely, with scribbles and pictures enhancing each other.

But when a child mirror writes these scribbles are not as easily and playfully written. The letters are written with enormous effort and cramped fingers: the child may turn the picture back and forth, but not recognise the writing.

How does mirror writing develop? One explanation may be how the eye perceives letters. Letters are abstract signs, perceived visually: they are not experienced through the other senses. The visual perception of the eye is based on a physical peculiarity: as with a simple camera, an upside down picture of reality is projected. The child, depending upon visual perception alone, transcribes the picture seen by the eye, which is – following the physical law – an upside down mirror image.

Children often draw things that are not well known to them upside down, which is a variation of the same phenomenon. It occurs when the child has been unable to explore the qualities of an object with all senses. Later, once he or she is better able to recognise physical space, things are depicted 'correctly', i.e. not upside down.

From birth perception is enhanced by the interplay of all five senses. The preschool child's knowledge of the world is action

based, developed through physical and sensory exploration. But with the development of imagination comes different aesthetic impressions: an awareness of things with constant characteristics can develop, which is the beginning of abstract thinking.

In scribbling exercises the preschool child is in precisely this phase of change from descriptive to abstract thinking. As children swap between different cognitions within writing and drawing exercises they experience internal tensions and insecurities, and demonstrate behaviour patterns consistent with a time of change. Old ways of thinking are being overlaid. In this phase of insecurity the child needs encouragement and help that supports both ways of thinking. This can be provided effectively through aesthetic education.

Aesthetic education is education about senses. According to Aristotle all cognition starts with the senses: the word 'grasp' originally meant 'understanding by holding and touching'.

According to today's evolution psychology, hands are a child's first toy and are important instruments for developing intelligence. By playing with materials and objects a child develops a relationship with the world, experimenting, exploring and inventing new games. He or she plays with relationships through role play; discovers characteristics and limits of materials. The child learns to remember and recall, combines impressions and realises combinations. Aesthetic education can help these processes by activating sense cognition. This involves animating and encouraging: starting the engine, but letting the child steer. To enhance writing skills this means stimulating children's writing with interesting suggestions, materials and ideas. With repetition and support, children become more relaxed as they break new ground and move to increasingly abstract thinking.

Looking at the thinking and learning process of children during the transition from preschool to school age, examples of mirror writing show that the holistic experience of progression from grasping to understanding is still missing. Aesthetic education helps by stimulating senses other than sight: it can be exciting and fun to start with play as a cultural technique. It need not always be colourful plastic letters. Alphabet soup or home baked letter biscuits help children realise that letters can be baked, cooked and eaten: they smell nice and taste good. They can be shaped from silt and clay, shaving foam and play dough. They can be kneaded, pushed, bent and squeezed. Letters can be displayed using stones, buttons, branches, conkers or grass. This helps the imagination and fine motor skills. Letters or words can be formed using wire, wool or cord. Written letters can decorate any room and provide possibilities for words and quizzes. Letters can be formed from sand, scratched in stones, moulded in plaster or in wax, planted... there are thousands of possibilities to link senses with letters and words.

Stimulation that includes tones and syllables is also highly interesting. Phonetic exercises using combinations of letters link an audible word with a visible sign. Music and rhythm, activity games, nursery rhymes and picture books offer many possibilities to enhance writing skills. But how can we address the phenomenon of mirror writing? Simple: mirror it! Small mirrors can be held in front of letters and suddenly the writing appears correct. Experiments with mirrors and mirror games open up new experiences and develop willingness to explore, discover and reflect on reality.

Within our culture children are in contact with writing from birth. Even before school they usually have awareness. To use

letters and understand them is a privilege of adults and older children: a child who shows interest in writing is aspiring to grow into the adult world.

Development psychologists describe three levels of understanding. First is metaknowledge, when the child does not understand what letters and sounds mean, but experiments with vertical, horizontal and scattered lines, waves or loops. Second, the child realises the connection between sounds and letters and starts to write and read words. This is when mirror writing often appears. At the third level, scripts and words can be identified with regularly appearing orthographic signs recognised and matched to words. Another step of becoming ready for school is the growing ability to abstract and repeat, enabling children to exchange culturally.

Given the time it took mankind to develop a written alphabet, the achievements of school children are truly amazing. A child cannot expect to achieve in a year what took humankind several centuries. But it will be easier to learn how to write in school when, from birth, writing and speech enhancing environments are made accessible.

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