

BBC news article 'Is Five too soon to start school?' from Feb 2008
<http://news.bbc.co.uk/1/hi/education/7234578.stm> which looks at how Scandinavia, especially Finland, are ahead in achieving, but don't start school till 7 years of age and spend less weeks overall in school compared to Britain.

Checking for neuro-motor readiness in infants for school, or for the presence of neuro-motor immaturity, the following are some of the tests done:

1) Draw a circle clockwise and anti-clockwise

To then be able to learn writing a b c d e g o p q... And touch ears using opposite hand to show left/right brain integration is taking place which leads to eyes being able to cross from left to right side of page and have equipment to read and for neural integration needed for basic maths.

2) One Leg Stand

Developmental Norms found by Schragger from University of Salamanca for a one leg stand :

- 3 years 2 seconds
- 4 years 4-8 seconds
- 5 years 8 seconds using either foot
- 6 years 20 seconds left or right
- 8 years 30 seconds left or right

Schragger found significant differences between children that had language impairments and those with normal language ability when the above were not achieved by the aforementioned children.

3) Finger and Thumb Opposition Test

(Excerpt from Assessing Neuromotor Readiness For Learning by Sally Goddard Blyth) By 38 months (3 yrs 2 months) of age a child should be able to oppose the thumb to each of the four fingers of the same hand in succession. This ability improves between 3 and 8 years of age, although some mirroring of movement may still be observed up to 10 years of age. Difficulty in touching the thumb with the fingers of the same hand in systematic succession may be indicative of minor cerebellar dysfunction. Satz et al. (1978) demonstrated that difficulty with thumb and finger opposition was among one of the strongest predictors of learning disabilities in the first years of primary (elementary) school. Qualitative assessment using this test is suitable for use with children from 5 1/2 to 6 years of age. Difficulties with thumb and finger opposition will contribute to difficulty with writing and are often found in children with a history of delayed speech. '

Also stated by Sally Goddard Blyth and I feel a very important argument to delaying the school starting age is : **'The ability to suppress synergetic (mirroring movements on the opposite side of the body) improves rapidly between the ages of 5 and 7 years and reflects the ability to act independently with each side of the body, which is considered to be a necessary starting point for laterality.'**

Laterality is the individual's ability to have a clear dominant side, to write, kick, listen and read with the same side; if this laterality has not yet fully developed, a child's brain is constantly hesitating as to whether to use it's right or left ... hand, foot, eye,

ear ... and over a day at school this can lead to using a greater amount of effort than the child who does not need to and has their laterality developed.

Tests used in Scandinavian Schools that check if children starting primary school are ready physically to learn; reliable for knowing how mature a child's motor system is.

1) Romberg Test

(Excerpt from Assessing Neuromotor Readiness For Learning by Sally Goddard Blyth) 'Developed by German physician Moritz H. Romberg to assess proprioception and control of static balance. It provides an indication of loss of sense of position if the child loses balance when standing erect, feet together, and eyes closed. By the age of 4 years a child is expected to be able to perform this test without loss of balance for 8 seconds with the eyes open and closed. The ability to perform the Romberg Test has been considered an important milestone in postural maturation, and links with another developmental marker, the suppression of synkinetic movements (a mirroring of or unintentional movement) in the hands and fingers of the contralateral hand when the child is asked to carry out the thumb and finger opposition test (see below).

2) Schilder Test

Checking Asymmetrical Tonic Neck Reflex inhibited to show left and right brains have integrated - needed to 'know where to start something'; if ATNR remains active linked to difficulties learning to write and/or expressing verbal knowledge in written form.

3) Tandem Test

Test to check gross motor development, placing one foot in front of other foot, heel touching toe of back foot, fwds and bwds... Checking balance, proprioception and spatial awareness.. Also needed for mathematical equations, understanding concepts of before and after, under and over, in front of and behind, to name just a few!

4) Fog Test

Walking fwds and bwds on the outside of the feet, prevents the brain from accessing higher centres, and if there is any immaturity present in the motor system this will be evident in this test, sometimes to the extent of a Simean or ape-type walk with arms and legs bent, and back leaning forwards at the waist.

Visual Perception Tests

The Tansley Standard Figures (see below*) are based on drawing tests originally devised by Gesell for the assessment of fine motor abilities and visual-perceptual motor skills. There is a developmental age at which a child should be able to copy each of the shapes. Discrepancy between a child's ability to produce an age-appropriate drawing and chronological age provides one other indication of immaturity in visual-perceptual motor skills needed for writing. A child of 4 years should be able to do a vertical and horizontal line; a child of 4 1/2 to 5 1/2 years should be able to do a diagonal line;

The Tansley shapes used are commensurate with chronological age of the child as follows:

+ sign from 3 1/2 years square sign from 4 years X sign from 4 1/2 years
Triangle sign from 6 years Union Jack shape from 6 1/2 years

Several years ago a class of rising 7 year olds at La Moye school got to do the Tansley Standard Figures. Difficulties were identified but these difficulties could have been identified even as early as 4 or 5 years of age.

For a child to be 'ready to learn' in a structured school environment, they need to have the physical development in place that would allow them to:

- have the muscle tone developed to be able to sit upright and still
- hold a pencil with their index and thumb only and without any movement triggering in their other fingers
- eyes to be able to track from one side of the page to the other - or read
- head righting to be fully in place so that they do not need to 'hold their head in their hands'

A child starts to read the whole word with the right brain - cup, port, key ; between the age of 4 and 6 years of age integration takes place to allow connections to develop with the left brain, which decodes or breaks down words so that they start to read... cup board air port mon key

Dr. Kjeld Johansen (Johansen IAS Sound Therapy) has found that boys often will take longer for their neural wiring to fully integrate over girls;

Each child needs to be allowed the time they need for their individual physical system to develop enough so it can support them whilst they sit in school, and they are not overloaded by what a teacher is wanting them to learn; in this way the experience of learning can be one of fun and achievement, an experience that will hopefully stay with them throughout their whole life!

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