

‘To see or not to see, that is the question.’

In - Sight

A diagnostic instrument for assessing higher levels of visual functioning in partially sighted children, six to twelve years of age, with a normal learning capacity.

In - Sight enables additional diagnostic for children with a visual perception problem; perceiving.
The starting-point is practical research aimed at visual functioning within the eye-hand radius (distance between eyes and hands),in an educational setting. In - Sight has a threefold aim. Firstly: establishing and registering what a child can do. Secondly, what the child can not (yet) do. Thirdly, In - Sight provides the possibility to systematically follow the progress in visual functioning over a number of years.

Who uses In - Sight?

In - Sight has been developed with teachers in mind, but can of course be employed by other professionals such as psychologists, special educationalists and occupational therapists.

Who developed In - Sight?

In - Sight is a product of Visio, Royal Institute for the Education of Blind and Partially Sighted, Huizen, The Netherlands. It has been developed by Ida Ekkens, Remedial teacher Visual and Tactile functioning.
Els Vervaaert, Special Educationalist has provided very valuable input. Reinier Pos has transferred the concepts on visual functioning in visually impaired children into graphics on the worksheets needed for the assessment. The design has been enhanced by teachers’ feedback from trial assessments.



Janine de Winter (6) working with In - Sight.
She was born with a lens deviation. She has had eye surgery and was prescribed glasses. Each day, one eye is covered with tape for an hour. It becomes apparent from working with In - Sight’s material that Janine likes viewing games. She loves describing what she has seen: small puppets, mice kissing each other or a rabbit that is hiding behind a toadstool. Janine views carelessly because she finds it difficult to concentrate on a visual task for longer periods of time. Due to this she misses out on information she could have seen. Moreover, she has difficulty with shifting gaze (from one spot to the another), although the surface overview is good. Janine needs support in visual-spatial perception, visual-motor skills and interpreting visual information. Janine is good at memorizing what she has seen. This will greatly help her with looking and perceiving.

In - Sight’s employability

For children like Janine, visual functioning can be specifically analyzed. Thus providing the opportunity of giving, for example teachers advice on visual functioning(what they can ask from their pupils and which aspects of visual functioning need extra attention)in an educational setting. Moreover, visual training-objectives can be accurately formulated and materials for the improvement of visual functioning can be selected.

In - Sight’s components

In - Sight has been structured around twelve categories of visual functioning. These categories have been divided into items increasing in difficulty:

- 1. Viewing strategy**
This concerns the ‘technique’ of viewing: the way in which a child approaches a visual task. For example: is it capable of scanning lines and columns without ‘leaping’, and can it include a surface on an A4 sheet in the perception.
- 2. Colour and contrast**
Can the child distinguish colours and name them correctly, not only on a black or white background, but also next to, on top of or among other colours? Is a large stimulus required? Can the child interpret pictures with an a-specific colour coding (e.g. a blue tree)? Can the child interpret low-contrast black-and-white photographs with blurred outlines?
- 3. Perception of detail**
Rather than focussing solely on the perception of ‘loose’ details and the size of the stimulus, In-Sight takes into account the situation in which those details have to be perceived. This could be, for instance, in a visually complex picture or as a part of an outline. The child also needs to be able to notice if certain details are missing.
- 4. Visual discrimination**
The items in this category are used to measure the perception of similarities and differences in shapes. Those shapes can be meaningful or arbitrary, they can be depicted on small or large surfaces or they can be surrounded by distracting stimuli. Perception of detail plays an important part in visual discrimination.
- 5. Third and second dimension**
The transition from concrete objects to their depictions is not self-evident. The items in this category assess this skill

- 6. Closure**
The international term for ‘making whole’ or ‘completing’
The brain compensates for eventual deficiencies in perceived visual information, in order to derive meaning from it. In In-Sight, the child might for example have to interpret a black line drawing of a cat or a house. Visual experience is very important in this category.
- 7. Part-whole relationships**
This category is closely related to the previous one. The child might for example be given a jig-saw puzzle or asked to indicate where certain shapes can be seen in a larger picture.
- 8. Visual-spatial perception**
This category is very important in education, as it concerns, among other aspects, the location of objects in relation to each other. Not only shapes have to be viewed, but also the distance between them has to be included in perception .
- 9. Perception of symmetry**
This is related to visual-spatial perception and includes topics as ‘direction’ and ‘rotation’.
- 10. Visual-motor skills**
There are many aspects to the co-operation of hands and eyes. One of them is ‘dynamic precision’, an important skill for writing and scaling, which is very demanding on line perception and the successive, quickly alternating motor response.
- 11. Figure-ground perception**
Most objects and shapes have to be perceived on a busy background. Many visually impaired children find this difficult. What visual information is relevant? How does the child deal with distracting stimuli such as lines or colours?
- 12. Picture interpretation**
In this category, a large picture, can be presented. It is often assumed that large pictures are easy for visually impaired children. Nonetheless, there are children whose visual field is too restricted to scan this kind of image in one go. In order to interpret the picture, they have to visually ‘synthesize’ it, composing it from the fragments they perceive. This skill is regularly underestimated.

In - Sight is divided into three colour-coded age groups. 'Red' has been designed for six to eight year old children, 'white' for eight to ten year olds and 'blue' for 10 to 12 year olds. The colour coding can be found on each folder with worksheets and protocols, in the top right corner of each worksheet, and in the category-band on the protocols.

In - Sight's core is determined by stimulus variables aimed at the educational setting. A few examples from the 'perception of detail' category:

- a drawn stimulus
- a photographed stimulus
- a singular stimulus
- a plural stimulus
- a hidden stimulus
- a marked stimulus
- a stimulus on the inside of a shape
- a stimulus on the outside of a shape

The variables are further clarified in the explanatory booklet .



The contents of the In - Sight briefcase

Apart from folders with worksheets, protocols, score-forms, score surveys and observation matrices, the briefcase contains, objects (e.g. small animals and cars) and colour-specific certificates for the child. Furthermore, a manual and an explanatory booklet can be found. The explanatory booklet holds an extra category-clarification, thus improving expertise.

In - Sight's application

In - Sight aims at practical visual functioning of visually impaired children within the eye-hand radius. The emphasis lies on what a child can do with residual vision. In addition to this medical related functional diagnostic, six factors were selected because of their frequent occurrence in many eye impairments:

- loss of visual field
- ⦶ reduced contrast sensitivity
- disturbed perception of colour
- ↔ difficulty with fixation
- diminished perception of detail
- ① short viewing distance

Every item is marked by a symbol. If a child does well on one of the items, it can be assumed that this factor has been sufficiently compensated. For example: the child can still name things from a short viewing distance. Or, in spite of reduced contrast sensitivity the child can cope with different nuances of a certain colour or shades of grey.

Assessment with In - Sight

- In - Sight can be used in four different ways:
1. Extensive: all items per age group
 2. Shortened: a limited number of items per age group
 3. Selective: this is determined by the reason why In - Sight is being administered
 4. Specific: aimed at one of the ophthalmic factors

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