Tactile picture books
for blind and visually impaired children

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Introduction

Picture books are of vital importance in children’s development and equally so for the blind and visually impaired children. Young children are constantly exposed to images and texts in their environment; texts and symbols are all around us, on information boards, cereal boxes, shop-windows, road signs, advertising signs etc. The child therefore quickly learns to recognise different letters and picture symbols and what they stand for. This recognition of letters and symbols is the first stage in the development of reading.

Blind and visually impaired children are often less familiar with letters and words when they start school than their sighted peers, since Braille is rarely a familiar element in the children’s environment, although they may perhaps have encountered it on elevators buttons. Books in Braille thus play a very important role in a visually impaired child’s development, even before they learn to read.

Tactile pictures can also explain things the child cannot touch such as volcanoes or dinosaurs, and a picture of a tree can give the visually impaired child an idea of what it looks like, as trees can be touched but never be perceived as a whole.

A tactile picture can be defined as a picture made in relief which can be read with your fingers. The main principle is that the pictures should be simple and lack detail, and that the structures must be perceptible.

Basically, tactile picture books communicate information through touch. The illustrations in tactile picture books are in relief so that they can be read with the fingers.

There are several ways of making tactile pictures, the most common being thermoform, swellpaper or different collage techniques.

In these guidelines we concentrate on collage pictures presented in books for blind and visually impaired children.

Target groups for the guidelines are: Librarians, teachers and rehabilitation staff, and producers of tactile material for the blind

In four chapters we describe the process of making and using tactile picture books, from the selection process to the reading.

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Book selection

When you decide to build up a library collection of tactile picture books it is important to choose books for different ages.

Toddlers need books with a simple object - one word per page or/and Nursery rhymes.

[Image: Original and tactile pictures from a simple book for toddlers (Hej, titta här! by Ilon Wikland)]

Children a little older would need good stories with pictures integrated. If you decide to make a tactile adaptation of a published book, choose short books, not more than 20 pages as Braille is voluminous.

The book must be one where text and pictures interact, which means that the text in itself is not the whole story; it’s dependent on the picture.

Never choose a book where the picture is just a piece of decoration and doesn’t add anything to the story.

The book should have a short text; if possible Braille and large print should fit onto the same page. Approximately 10 pages in a book should contain pictures; no more, since otherwise the book will be too thick and clumsy.

Ensure Copyright clearance.
Designing the book

The text

The narrative text should always be separate from the picture. However, there can be explanatory text in the picture.

It is recommended that both Braille and large print be used. This allows sighted adults, with no knowledge of Braille, to read the book aloud to the child. Children who have some vision can see the large print and also get to know Braille.

You can either separate the large print text and the Braille, or alternate the lines of printed text and the Braille.

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<td>Two examples of text lay-outs that can be used. The text is in the Swedish language.</td>
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In a book the text should be on the left side and the pictures on the right. Both sides of the page are used, the text on one and the picture on the other.

Braille lines should be no more than 15 - 20 cm. Braille punctuation to be in accordance with the country’s custom.

In order to estimate the size of the text, make a sketch. Braille fonts can be found on the Internet, for example at www.duxburysystems.com

The large print can either be printed directly on the cardboard or pasted. The Braille can be printed on transparent plastic and pasted on the page. There is an adhesive transparent plastic available (Fasson Products, Roll Material South Africa), which can be put in an embosser or Perkins machine.
An alternative is to use Braille on paper and then paste into the book.

For the large print use fonts such as Verdana or Ariel 18 points - 24 points.

**Drawing the picture**

The designer starts by analysing the images in the ink print (main stream) book:

- Which are the most important parts of the picture?
- What is it in the picture that tells something which isn’t described in the text?
- Which elements in the picture add something to the story?

When you have identified the most important parts, make a sketch where you have simplified all the details.

When drawing the tactile picture:

- Don’t use shadows in the tactile pictures. Shadows are for the sighted to illustrate volume. There are no shadows in the world of the blind.
- Avoid perspective as it is a difficult concept for the blind child to understand that objects which are far away are smaller than those which are close by.
• When depicting a human being or humanised animal, the person should either be shown from the front or in profile. Always show the whole body. Always show both arms and legs. Be sure the arms stand out from the body; otherwise it will be difficult for the blind person to discern them.

• Remember that objects in a picture book should always have the same proportions and size throughout the book. See example below.

As the books are also to be used by partially sighted, not blind only, you have to take the light-dark contrast into consideration. You can read more about colour contrast at www.lighthouse.org/accessiblity/effective-color-contrast/

The best contrast is a dark background and a bright object. However if the object is dark the background must be bright.
Choice of material

After having made the sketch you choose the material you are going to use for the different objects in the picture.

The most important part in the tactile picture is the shape. This emphasises that the shape is more important than the material when it comes to understanding the picture. The material must not deflect attention from the shape.

There must also be a tactile contrast in the feel of the materials. Concentrate on the tactile perception when you choose material. Forget the visual sense.

As objects in a tactile picture are shown in a reduced scale you cannot use authentic material. For example when you represent a lamb do not use lambskin but a fur with shorter hair.

**Paper quality**
For the pages choose a thick paper or cardboard that is tough and doesn’t tear (350 mg). Remember the book is going to be handled many times by many children.

**Glue**
Use glue that has no smell when it has dried. The glue must be of an unobtrusive consistency so that it doesn’t show and detract from the feeling of the picture or obstruct the details in the picture. Use double-coated tape when pasting the text.

**Templates**
Before you cut out the material make templates, in heavy cardboard or carton, of the different shapes in the picture. Put the template on the sheet of material and cut out the figures. You can either cut directly or outline the figures before cutting.

**Binding**
Instead of binding you can use a simple folder with ring buttoning. Another solution is to use spiral binding.
Child safety

It is very important that the collage parts in the book should be securely attached to the page. The child should be allowed to explore the book with their fingers without parts falling off.

A text regarding child safety should always be included in the book. This text could have the following wording:
“This book contains small parts which may become loose over time. Never let a child under the age of 3 handle the book alone.”

When selecting your own story

First select a story you know, not your own invention. That can come later.

Choose a short story where the text, in either large print or Braille, fits into a maximum of 10 pages.

The number of picture pages and text pages should be the same.

The text should be short and rhythmic.

When constructing the book ensure that concepts that can’t be explained in the text are shown in the picture.
Lending tactile picture books

Most libraries for the blind and visually impaired do not meet the child personally but have contact with the borrower via telephone. Usually there is an intermediary, parent, teacher or librarian who borrows the book for the child.

It is important to engage in dialogue with the borrower to ascertain if there is a special subject or genre that the child likes. Remember each child is an individual with an individual taste.

During the dialogue you also need to know if the child is familiar with tactile pictures. If not, even an older child might need a book for beginners. Then choose a book with a rhythmic text, otherwise the child might become bored.

Generally beginners should start with simpler books. If possible lend more than one book the first time, so that they have a choice. The borrower must also be informed about the content of the books.
Reading tactile books to a child

The first meeting with the book

It is important that a blind child or a child with grave visual impairment gets in touch with Braille as early as possible. Even though a two year old toddler can’t interpret the Braille dots as letters he will eventually start to ask the meaning of the dots.

A small blind child might never have come across a book before, until he has been introduced to a tactile picture book. Therefore let him feel the book, hold it and turn the pages, so that he comes to understand the concept ‘book’. In this process you should also show the child how a book is used. Teach him how you turn the pages and tell him that there is text to read and pictures showing certain objects. The very first meeting with a book, is to give the child an understanding of the concept and that in books, there are not only tales but also images that depict different objects. Tell the child what the book is about. Then start reading. If the child doesn’t show any interest put the book aside, but don’t give up. The child might be more interested the next day. If you borrowed more than one book you can also try a different one.

Let the child explore the book

Reading aloud

Reading together - adult and child - can be a time of intimacy and pleasure. It can also contribute significantly to the development of a blind or visually impaired child. Through the written text the child will get to know the difference between written and oral language, which is important to his future literacy development.

The first books with tactile pictures that you choose should be simple, for example, a book with a very simple text and one object per picture. Continue with books such as nursery rhymes or other simple text. To emphasise, the very first time you read to the child you start by showing him the book. Let him feel the book to familiarise himself with it or to recognize a book you have read before. Then tell the child you are going to read a story, show him the Braille text so he knows you are reading the
letters. Then show him that there are tactile images, but don’t explain yet, or ask him what they represent.

Read the story and every now and then discuss it with the child. Ask questions. There might be words or concepts that are totally unfamiliar to him. If the child shows special interest in a picture, you can feel the picture together. The child might have his own interpretation of the image. Don’t tell him it is wrong, rather discuss with him why he interprets the image the way he does.

When you explain a tactile image to the child you must clarify to yourself why a picture resembles the object it depicts. It will be obvious to a sighted person as the image can usually be compared with something we have in our visual field, the things we can take in with the eye. How do we explain what a picture is for a person who has no visual field?

Imagine you have an image of a horse. It is relatively simple to see that an image of a horse resembles a real horse. The blind child might never have experienced a horse or a whole horse. One way of helping him is to provide him with a toy horse and then explain that in the book there is a depiction of the horse.

When a sighted person looks at a picture he sees the whole picture. To use your finger tips for perception of an image is different. First you experience the detail. Detail after detail is put together and then you can perceive a whole picture. In order to understand a tactile picture, if you aren’t a very experienced image reader, you must know what the picture represents. That is why it is so important to tell the child what the picture represents. If the tactile picture contains several figures or objects it is necessary to tell the child what they are, and how they are placed in the picture. The next step might be to show the details. The very first time you read the book to the child, depending on how complicated the picture is, it might be enough to show only one or two pictures.

Always remember that it can take a long time for a blind or visually impaired child to understand a tactile picture book. Disinterest in a book might not imply that he isn’t interested in other books. It can simply be that you didn’t choose a book that was funny or thrilling enough. Reading tactile picture books should be great fun!