

Reading Pictures – Amiria’s journey to tactile learning

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Background Information

Amiria’s tactile learning pathway has been influenced by my experiences and knowledge as her Resource Teacher Vision. It is my learning and journey in tandem with working with Amiria that has provided her with a solid foundation in her understanding and knowledge in tactile graphics.

I believe that the New Zealand (NZ) Tactile graphics initiative occurred due to the sharing of the Hungry Fingers philosophy and resources by Bog Marek at the 2013 SPEVI conference held in Auckland, NZ. The Palmerston North Visual Resource Centre was fortunate enough to have the first Hungry Fingers kit for trial in New Zealand with our learners. This trial was led by my Palmerston North colleague, Trish Bishop and supported by Ruth Wedde, BLENNZ Immersion Co-ordinator.

It became evident that learning tactile skills and the underlying concepts, need to be taught in a planned and systematic manner for our learners to be successful as they began to engage with the regular curriculum and then standardised assessments.

To date the NZ Tactile Graphics Project work, led by Trish, has provided us with a Framework – The BLENNZ Pedagogy of Tactile Graphics and two guidebooks – The development of Early Tactile Graphic Skills and The Development of Tactile Graphic Skills for Mathematics. Resources to support working with learners are available as Kiwi Lines Tactile Programme, part one and part two, The Early Tactile Kit and The NZ Tactile Graphics Image Library.

The BLENNZ Pedagogy Tactile Graphics contains five guiding principles that support tactile graphic skill development. It is these five principles that underpin the work that I have been completing with my learners. Whilst gaining a good foundation in their tactile learning there has been significant development in the learners’ language, early literacy and early mathematical concepts. These five principles are:

1. Understanding body concept and spatial orientation.
2. Real life experiences facilitate the progression from 3 dimensional to 2 dimensional images.
3. A reduction of complexity in a graphic makes it easier to interpret.
Consideration is given to the view taken and adding detail sequentially.
4. Knowledge and understanding of lines and their orientation.
5. Time: for exploration and to gain understanding.

Introducing Amiria

Amiria is 4 years and 7 months old. She was referred to BLENNZ at 8 months of age. Amiria has the eye condition Optic Nerve Hypoplasia, she does not have Septo-Optic-Dysplasia.

Her binocular distance acuity is in the range of 6/96 – 6/120. Her print size equates to N80 at a 15 - 20cm distance, adopting a null point, head turned to the right and eyes turned to the left.

Amiria started to attend an Early Childhood Centre from the age of 20 months, currently attending five hours daily. Amiria loves to learn through language and song. She is demonstrating excellent memory and is able to learn new concepts with amazing ease. Her physical skills are well developed as are her social skills.

Amiria will be commencing school in May 2020. I believe that she will become literate through using Braille. Her small amount of residual vision has significantly aided her learning.



The learning environment, the activities and the resources that were the basis of Amiria's journey in learning Tactile Graphics is summarised below using the guiding principles of the BLENNZ Pedagogy of Tactile Graphics as the headings.

Principle 1. Learning body concept and spatial orientation through play

Amiria is an active learner, she likes to play outdoors. She is given the opportunity and the encouragement to 'have a go' and to persevere. As a result, she is a confident mover and explorer in space. Most weeks, when I visit, we take her cane to the outdoor areas at her centre to explore and revisit.

Amiria has been able to apply her understanding of space and body concept in relation to models; especially her 'Barbie' type doll with moveable limbs, through participating in songs with actions, by putting together the wooden magnetic 'teddy bear' from the Hungry Fingers resource and through her drawings.

Defining space and supporting effective search through using trays and bowls

From when our little ones are sitting with support, I like to provide a defined search and working area. For this I use trays and bowls in a range of materials, metal,

wooden, aluminium and plastic. Each material gives different acoustic and tactile feedback. The language that describes temperature and the material is included when setting up the activity. For example, 'we are using the metal tray, it feels cold'.

Understanding space and supporting hand function by using boxes and tables

Amiria is naturally quite curious so following on from using an open container, the tray and the bowl, I introduced boxes with a large cut-out in the lid. The first things to find were familiar objects with common features; beads, balls, and slinkies. Once she became confident in exploring a more confined space then the lid was placed on to make a closed space and tins were included. There was so much language to introduce, both about the containers themselves and about the contents.

For example, The Boxes; the top/bottom/sides, inside/outside, on top/underneath, round/square/rectangular, smooth/textured, heavy/light and all the action words – put it in, shake, roll, tip over.

The contents were themed; objects that were 'the same' but also had unique characteristics. For example, balls with holes, balls with bells, soft balls, bumpy balls and so on.

Apart from the learning of new language and concepts Amiria learnt to use her hands and fingers in new ways, incorporating using two hands in different roles.

Understanding space and supporting curiosity through using bags

From early on I had used a hessian shopping bag to bring my resources to Amiria. It was easy for me as I visited several learners on the same day, and it made transportation simpler.

I recall the day when for the first time Amiria initiated really exploring the contents of the bag and returning to the bag for a change of activity. This was a day to celebrate.

From then on Amiria liked to unpack her bag and did so, completely at times.

Some of the boxes and tins were later replaced with smaller bags and pencil cases; encouraging two hands to work together to open zips, Velcro, ties, buttons and magnets.



Principle 2. Using real life experiences as the foundation for learning activities

It is really important to 'seize the moment', to use any opportunity to reinforce prior learning and to introduce new learning. Within Amiria's Early Childhood Centre there are a wealth of opportunities throughout the day that allow us to offer new language, to support concept development, to promote movement and to give a purpose for doing so.

In order to encourage independence and success in eating specific tools were provided to Amiria's Early Childhood Centre. At her place a non-slip mat and a contrasting plastic tray was consistently provided. Her plate and the food provided was placed on the tray as well as any utensils required. This routine activity gave her multiple opportunities to practice, a consistent layout and a defined area in which she could locate her food.

Often our learners are simply moved through space from one defined activity to another. It is important to make time to interact with the environment as we travel; to be open to investigating a noise, the things that are consistent to the route or something that is not usually on the route taken. This opens up the possibilities of incidental learning as well as supporting travel skills for the future. At times I felt that Amiria was moving through space without purpose or that she was not fully experiencing her environment. So, to support her learning in this area we made time to explore a priority.

Being adaptable, to use unexpected opportunities when they arise can be valuable, in giving the possibility of offering new language and building on existing concepts. I recall one day when a delivery of foods had arrived at Amiria's centre, one of the boxes felt cold, so we set about finding out why the box was cold, and the others were not. An opportunity to learn about temperature and weight was provided in a natural and meaningful context.

Books - starting with Scratching and Exploration books

Following on from the use of 3 dimensional toys, I introduced Amiria to some surfaces that had texture – a flocked gift bag and cardboard with corrugations. Texture was then placed in a book format, we called these the 'Scratching Book' and this got little fingers exploring the texture both vertically and horizontally, enjoying the texture and the sounds that some surfaces gave.

At a similar time Amiria was given an 'Exploration Book'. Her book in this format included beads threaded on elastic and attached to the page horizontally. This could be pulled or strum giving a direct action and re-action. Other pages offered real objects; like metal keys on a ring, bells and other noise-makers.

Introducing new books with real objects and models

We began to produce books specifically for Amiria after checking with her parents about the regular activities in her life that could be made into a four or five page

collage book. Each page was also represented by a model that was used during the introduction to the book and in subsequent readings of the book. Each page included a simple caption in large print and braille. The sequence of the activity was simplified and accurate. There were books produced introducing the members of Amiria's family, activities whilst visiting extended family and going to the Supermarket.

Later I introduced Amiria to the objects from a child's tea set. Unpacking the box containing the tea set, exploring the various objects and social play occurred before the introduction of the book 'The Tea Party'. The Tea Party theme was later used and extended for an Immersion course that Amiria attended.

In a similar fashion Amiria was introduced to 'The Bathroom Book' through the initial exploration of a cake of soap packaged in a box. She spent a lot of time exploring the soap and the soap box. This package of soap then became the cue for the book as well as providing extensive opportunity for offering new language and concepts.

More models

Being able to produce books specifically for Amiria that reinforced familiar and regular routines and sequences was invaluable. One of these books was 'Amiria is going to Top Kids'. The four models used were the lunchbox, the backpack, the cane and the car. Amiria showed that she was making connections between the models and the objects within the collage/tactile book. At this point we elected to create the tactile graphic of a car by slicing through a small plastic model vertically. To add to Amiria's experiences we would also sing 'the wheels on the car go round and round...all the way to Top Kids'.

Another book selected due to the original song was 'The Wheels on the Bus'. This book was introduced through the song and a large model of the bus with seats and people that Amiria was able to explore. The language offered included the specific parts of the bus as well as the language of position and actions.

The most recent book that has been introduced to Amiria is 'Over the Bridge'. We were fortunate enough to obtain 'matchbox' size models of each of the vehicles in the story and the bridge was generously made for us. Again, looking at this book was preceded by exploring the six vehicles, the boat and the perfectly sized bridge.



Producing a familiar book in Piaf

Somehow, in our play and our singing together the song 'Five little ducks' came up. I knew that we had finger puppets and a collage book with the text that reinforced backward counting. To introduce this book, we put together a collection of 'duck related' objects in a pencil case, including a graphic of a duck produced in Piaf.

I felt that the simplicity of the book would make it easy to introduce my first Piaf book to Amiria and we did. She had no difficulty transferring her knowledge from the initial collage book to the new Piaf book.

Principle 3. Reducing complexity through the view taken

In providing Amiria with simple tactile graphics, whether in a collage form or as a Piaf illustration it has been important to consider the view taken and to be consistent throughout the resource being prepared. Using a 'birds-eye' view is excellent when focussing on placement, for example in a place setting for the tea set. A side-on view has however been more successful in presenting images of vehicles and animals.

The detail and the complexity of an image has determined the order in which particular objects are presented to Amiria. With regard to the tea set she explored the dis-similar items first. The plate, the spoon and the cup were introduced as objects and tactile graphics with the language for the object and their function. Later more visually and tactually similar objects and tactile graphics; the knife, fork and the spoon were included. Again, function aided in identification as did consistent placement.

Principle 3. Adding detail in graphics sequentially

Having had a positive experience with the Piaf graphics I then wanted to introduce Amiria to the specific graphics that she will encounter in her early reading materials and sources from NZ Tactile Graphic Image Library. I have just started with introducing her to the boy and the girl images in a sequence book format. Each book starts with a circle for the face, adds facial features (eyes, mouth, nose, ears) and then adds the hair – this is the feature that will define who the graphic is – boy, girl, mum, dad, grandad and so on. Again, the visual and tactile simplicity of the images have supported new learning for Amiria.



Principle 4. Understanding lines and their orientation

Amiria has been introduced to different types of horizontal lines to encourage and support her ability to track along horizontal lines with her fingers.

She has been using the plastic game pieces from the resource 'Tac-tiles' in order to discriminate between different textures. The four textures in the game are smooth, bumpy, lines and a grid. It has been interesting that when provided with the Piaf cards to match these with, then the clarity and simplicity of the Piaf increased her success.

Amiria has only once been introduced to playing cards from the Kiwi Lines resource. She was able to very quickly link the names and match the cards given for a solid line, a zig-zag and a wavy line. I do not feel that it will take many more occasions before she becomes confident with discriminating between and naming a dotted and a dashed line. She is on the pathway for learning the Language of Lines.

Principle 5. Allow time for exploration, repetition and understanding

Our time is the most valuable resource we can provide for our shared learners.

Time for observing and intervening, if or when appropriate.

Time for real experiences.

Time for setting up learning opportunities.

Time for repetition, to reinforce or to extend learning.

Time for repetition, for pleasure and enjoyment.

Time to share and re-live experiences.

Time for listening to, sharing and for discussion with parents, family and other professionals.

Summary

Amiria's learning was supported through structuring the environment, the resources and activities in a sequence that promoted her understanding of tactile graphics

through curiosity and perseverance. Consideration was given to setting up the environment for success, getting little fingers to search and explore, using Amiria's real life experiences, using models, books and song to enhance her understanding and using the 'familiar' to introduce new learning.

Remaining mindful of the five guiding principles of the BLENNZ Pedagogy of Tactile Graphics has positively influenced and supported Amiria's learning.

Working with Amiria has been a pleasure and a privilege. It is now my responsibility to take what I have learnt from Amiria, to apply and adapt this for the younger learners that are following a tactile graphics and braille learning pathway.

Reference

Bishop, Trish, & Wedde, Ruth. (2019).The BLENNZ Pedagogy of Tactile Graphics.