

Storytelling: Keeping it complex.

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Introduction:

I have worked in early childhood for a number of years and for the last eight have been the Head Teacher at Westmere Kindergarten. Over this time my own interest in ICT has increased and this has led to seeing how ICT can fit in the early childhood setting in a meaningful way. Initially children worked on an old P.C. As funds permitted equipment was upgraded.

Today we have two ibooks, aG5 imac, two digital still cameras and a video camera for the children to use. Westmere Kindergarten has a long tradition of story telling which came about through the use of the assessment framework known as learning Stories. These are narrative style, are accessible by children and their whanau/family, and tell a 'story' of the learning that happened for the child. The learning is then analysed and the next step is planned for with the child's interest in mind. Because of this narrative style, children have become more familiar with the storying nature of documentation and began to tell their own stories initially through the 'child's voice'. Teachers then provided the opportunity for children to tell their own stories, to a point where it has become accepted by children, teachers, whanau/parents that story telling is some thing that we 'do here'. Initially these stories were hand written by the teacher as the child dictated them and over time it seemed a logical progression to use the new computers to record children's stories. The children and the teachers are now able to document the children's stories in a range of ways, including the use of ICT. It has frequently been the case, over time, that children develop complex and imaginative stories.

It has been our impression that children's stories increase in complexity, connections and continuity over time, but working full time in the kindergarten environment has not given the teachers time to analyse in depth the learning that is happening for children through their story telling. This project has enabled me to look more closely at this, with ICTs as an additional frame.

This project has also given me the opportunity to explore how different programmes can assist children's story telling, e.g.. Using Kidpix and PowerPoint, Garageband and iMovie.

My Core Interest:

What is the process whereby young children in an ECE setting can use ICTs to assist them to tell stories? What are the affordances (what makes it easy?) and what are the constraints (what makes it difficult?). The initial framework for analysis will be to look at complexity, connections and continuity.

Rationale:

Research has shown that ICTs can be integrated into teaching and learning to enhance the curriculum of Te Whāriki and associated learning dispositions (habits of mind, or approaches to learning situations (e.g. a capacity for persisting, being engaged, communicating, taking responsibility). Story telling is part of this learning.

Research Question:

Can the use of ICT's enhance the complexity, connections and continuity of young children's story telling? Then if it can...

Sub Questions:

1. What is the process whereby ICTs may assist some children to use storytelling to make connections with what they already know and with prior experiences?
2. What is the process whereby ICTs may assist some children to tell more complex stories?
3. What is the process whereby ICTs may assist some children to tell stories with continuity of ideas?
4. What are the 'affordances' and the constraints along the way when using ICT's to

record children's stories?

Methodology:

This research is made up of five case studies and is written in an ethnographic style, providing a narrative account of what happened over the time I was working with and collecting data for the five children. I have taken the role of participant researcher as I have found being able to work with children while conducting my research to be the most valuable method for this research.

Data Collection and sources:

During my research I used a journal where every day I recorded what happened, with each of my case study children and also wrote what was happening for other children who were interested in recording their stories.

I used the learning story framework to write assessments during my research gathering, and contributed to the child's portfolio in this way, these were supported by photographs and C.D's of their work. The other teachers learning stories, and work with the children also contributed to the data I gathered.

Parents have also contributed by way of parent voice, offering their perspectives of the learning that has been happening for their child. They have also provided insights into what has been happening with story telling and ICT use in the home environment.

Children have contributed by way of the child's voice, offering their perspectives of what they have been doing and of course by the stories they have told.

Sampling:

Who: The research took place at Westmere Kindergarten where I had developed relationships with the children, whanau/families teachers and wider community having worked there for many years. I worked with a group of eight children, all over four years of age and attending the morning kindergarten session. Out of these eight children, five children became my case study children, selected because of their on going interest in ICT and storytelling. The kindergarten assessment practices are credit based, planning from individual and group interests and strengths. The children were selected by their interest in story telling; therefore the research was driven by the children's interests rather than from adults' perspectives.

Frequency: My research took place over the second term of 2005, children's stories were taken into consideration before the data gathering took place and some data was gathered after term two as the children's interests continued. Data was collected on a daily basis. This was flexible, and involved the five children at times when it was convenient for them to tell their stories.

Analysis of data:

Analysing the processes (defining stories as including actors and environments, woven together to describe events, sometimes with a time dimension).

1. Complexity: examining the stories told by the children at Westmere for elements of complexity such as

- The number of actors

- The complexity of event
- The complexity of environment Actors' feeling states included

The researcher will look at previous stories to add to this list.

2. Connections: examining the stories for elements of connection such as

- Reference to the child's own experience
- Reference to people places and things outside the kindergarten

The researcher will look at previous stories told by the children at Westmere to add to this list. 3. Continuity: examining the stories for elements of continuity such as

- A storyline of an event over time
- Continuity of story from one story to another; a return to the exploration of the same theme.

The researcher will look at previous stories told by the children at Westmere to add to this list.

4. The 'affordances' (what aspects of ICT assisted with one or more of these elements?) and the constraints (what aspects of ICT constrained the development of one or more of these elements?)

Underpinning these indicators are the dispositions of 'Taking an Interest, Being Involved, Persisting with Difficulty, Expressing an Idea or Feeling, and Taking Responsibility', as these show children are ready, willing and able (Carr, 2001) to find opportunities to learn.

These indicators were developed in conjunction with my research partner Professor Margaret Carr, incorporating her work around complexity, connections and continuity. I also analysed stories told previously by children to find out what indicators were consistent through the stories.

Ethical Considerations:

My research has been approved by CORE education and I have taken into consideration the framework developed by Bone, Cullen and Hedges.

Consent has been gained from parents/whanau and from the teachers at the centre.

When ever I have documented children's learning to share I have asked the child who owns the documentation if I am able to keep a copy and share it with others, there by obtaining verbal consent from participants. I have taken the time to build authentic relationships with the children I worked with and this is evident in the following case study documentation.

Literature Review

My research question was about using ICTs in Children's narrative and storytelling. This takes ICTs into meaningful contexts in line with sociocultural approaches to literacy and learning. Sociocultural approaches to learning in early childhood in New Zealand have emphasised learning dispositions, complexity, connections and continuity. Sociocultural theory arises from a understanding that higher-order functions, such as learning, grow out of social interaction As a part of my research I have conducted a literature review, and the following are the ideas I found useful during and after my research: A sociocultural approach to literacy including early literacy, multimodal literacy and dispositions; ICT in meaningful contexts the notion of complexity, connections, continuity, and children's narrative and storytelling, all from an early childhood perspective.

A sociocultural approach to literacy.

Brown, Collins and Duguid (1989) view learning as a process of enculturation that is supported through social interaction and conversation. Cognition and the circumstances of supporting learning are inseparable.

"Children learn about literacy as they engage in everyday practices in a range of social and cultural contexts within their families and communities." (Luke, 1993) underpinning the practice of early childhood teachers working in a New Zealand context is the sociocultural curriculum, Te Whāriki. The curriculum emphasises the critical role of,

“Socially and culturally mediated learning and of reciprocal and responsive relationships for children with people, places and things. Children learn through collaboration with adults and peers, through guided participation and observation of others, as well as through individual exploration and reflection.” (Ministry of Education, 1996, p.9)

If we, as teachers keep to the forefront in our daily interactions with children a sociocultural lens then these interactions will be authentic and work with children’s strengths and interests. Today in a child’s life they are exposed to cultural activities far different from what we as adults were exposed to at their age. Children become familiar with a wide range of literacies in their family and community, computers, digital cameras, etc have become a very real part of the child’s world. Barratt-Pugh (2000, p.17) suggests that a sociocultural approach to literacy is one in which:

“Children’s language and literacy learning comes from an active engagement within particular cultural and social contexts. Research suggests that what children learn and do with written language is to become relative experts within particular activities, (McNaughton 1995). In other words, as young children take part in events that involve literacy, they gradually build up their knowledge, skills and understanding of a range of literacies. As young children take part in events that involve literacy, they gradually build up their knowledge, skills and understandings of a range of literacies” (p.17).

Barratt-Pugh argues, “that children learn about literacies from an early age through their participation in social and cultural events that involve literacy practices.” (p.25) Teachers need to make the most of this knowledge that children come to early childhood centres with and support and extend on literacy practices of value in their communities.

Literacy learning is a complex and multi faceted process, one, which requires many approaches, but effective literacy learning involves, “decoding text, recognising the meanings of text, understanding the purposes of different texts and uncovering and challenging the ways in which texts construct the world.” (Luke & Freebody, 1999, cited in Barratt-Pugh, 2000, p. 25) Children’s interests in storytelling and their exposure to using ICTs offer an opportunity to support literacy learning in a sociocultural manner, by sharing events, and interactions with people, places and things.

A sociocultural view is in line with my own philosophy of early literacy and is also inline with the sociocultural nature of Te Whāriki, the early childhood curriculum. My view is that children learn by participating in a range of experiences within their families and in the wider world, literacy therefore is embedded in everyday events, at home, and in the early childhood centre. These everyday events and experiences will centrally include popular culture. Popular culture plays a significant role in children’s literacy development, from recognition of symbols such as the McDonald’s signage to individual interests such as Batman, or fairies etc, “Popular culture is part of everyday life and is cultural capital for many children growing up in Australia” (Diaz, Beecher & Arthur, 2002, p.309) The same can be said for children growing up in New Zealand and world-wide. Children are able to draw on their knowledge and interests in popular culture and incorporate literacy into their play. “When popular culture artefacts linked to children’s interests are included in early childhood programmes, children integrate a range of literacy practices in their play. For example, they follow instructions for games, read magazines and comics, consult posters and diagrams, read catalogues and ‘junk mail’, make signs and create texts connected to their popular culture interests” (Arthur, 2001, p. 303).

Arthur (2001) makes the point that the inclusion of popular culture into an early childhood curriculum provides opportunities for children to access knowledge gleaned from popular culture at home and in their communities. Access to popular culture offers the opportunity for children to widen their literacy learning and weave this into their daily lives in an authentic way.

In the article “High quality early literacy programs”, Arthur and Makin (2001) outline characteristics of high quality literacy programs in early childhood. They suggest that there is an acceptance that literacy learning begins well before school age (ALLC, 1995; Sulzby, 1985; REA, 1999, cited in Arthur & Makin, 2001, p.14), and they also highlight the importance of the first years of life in respect to learning. Arthur and Makin have identified five core principles that should underpin good literacy practice:

1. Exchanging information with families.
2. Building on children’s home and community experiences.
3. Planning to support individual literacy needs.
4. Integrating literacy experiences across the curriculum.
5. Interacting with children to scaffold literacy understandings.

Centres with high quality literacy programmes incorporate literacy in all areas of the curriculum. It is recognised that “opportunities to incorporate literacy into play helps children to develop understandings of the functions of texts” (Neuman, Cople & Bredekamp, 2000, cited in Arthur & Makin, 2001, p.16).

Technology and popular culture play significant roles in children’s developing literacy; these have been discussed more fully in the section of this literature review.

Luke and Freebody (1999) have identified four practices, which they argue children need to be immersed in to become effective literacy users. These practices are not a hierarchy of skills but all are equally necessary for literacy development and can be seen as a repertoire of practices towards becoming literate. The practices they identify are:

- Break the code of texts. This refers to the relationship between spoken sounds and written symbols.
- Participate in the meaning of text. This involves making meaning from other texts, which may be culturally specific including written, visual and spoken text
- Use texts functionally. This refers to knowing a text's purpose.
- Critically analyse and transform texts. This refers to the de-constructing of texts and they may be used in a 'real' way with children.

Literacy learning is not the only learning of interest in this project. The Learning Story framework used widely in early childhood recognises learning dispositions as valued learning. The domains of learning dispositions highlighted are:

- taking an interest
- being involved
- persisting with difficulty or uncertainty communicating with others
- taking responsibility (Carr, 2001, p.23)

These domains of learning can be analysed in three parts, being ready, being willing and being able. "In essence, being ready is about seeing the self as a participating learner, being willing is recognising that this place is (or is not) a place for learning, and being able is having the abilities and funds of knowledge that will contribute to being ready and being willing." (Carr, 2001, p.23) In a New Zealand context, these dispositions are clearly linked to Te Whāriki, the early childhood curriculum, and correspond to the learning outcomes and strands of 'belonging, wellbeing, exploration, communication and contribution.' Learning dispositions can be described as 'an inclination or tendency to act in a particular way.' (Encarta World English Dictionary, 1999) Katz (1988), says that 'dispositions are a very different type of learning from skills and knowledge. They can be thought of as habits of mind, tendencies to respond to situations in certain ways' (p.30). In a later work Katz (1993) suggests that having the knowledge or skill to read is different from having the disposition of a reader (Katz, 1993). Carr and Claxton (2004) suggest reading 'disposition' as a verb rather than a noun. "One does not 'acquire a disposition', one 'becomes more or less disposed' to respond in suchandsuch a way." (Carr & Claxton, 2004, p.88) Having an interest encourages involvement and because of this interest children are more inclined to persist with learning despite the difficulty, redirect their learning and see things through to completion. No matter what the interest, it is the having of the interest that is the most important thing for children to remain involved in their own learning.

Complexity, Connections and Continuity

There is not a great deal about children's storytelling in the literature. Some writing and thinking links to storytelling and it is these writings I will refer to in this section: notions of complexity, connections and continuity have been emphasised in regard to assessment stories (Carr, 2004, the NZCA Collection) and in other areas of early childhood.

Complexity

Complexity can be defined as 'being made up of many interrelated things' (Encarta World English Dictionary, 1999). An early childhood definition could be one of 'richness'

Carr (2001) speaks of the importance of trying to "capture and protect the complexity of what children might be learning." One of the ways this is possible is through providing opportunities for children to record their stories. Because children in early childhood cannot write their stories then other ways of recording and documenting must be investigated.

In regard to children's storytelling complexity can be seen on many different levels, complexity of themes within a story, how many actors, how many actions are all indicators, which help to define the complexity within the stories that children tell.

Connections

Te Whāriki, the early childhood curriculum recognises the importance of making connections between home and the centre as this helps to build a sense of belonging for the child. Storytelling encourages children to make connections with people, places

and things, with knowledge they have acquired and with events in their own lives through the narratives they share. "For a number of reasons, connecting with families enhances the children's learning." (Carr, 2002, p.21). These connections can be made by the stories children tell, as well as the revisiting of their stories with parents/whanau. Wenger, also speaks of the importance of children connecting with the wider world,

"One problem of the traditional classroom format is that it is both too disconnected from the world and too uniform to support meaningful forms of identification. It offers unusually little texture to negotiate identities: a teacher sticking out and a flat group of students all learning the same thing at the same time." (Wenger, 1998, p.269)

Continuity

Storytelling provides the opportunity for continuity overtime and between stories and continuity of learning. Wenger (1998) speaks of communities of practice "creating a dynamic form of continuity that preserves knowledge while keeping it current." (p. 252) Storytelling is part of the culture of many early childhood settings and is a way of building continuity overtime for children. Wenger also speaks of continuity in terms of engagement; he suggests that storytelling is one way of supporting participative memory (p.238). Storytelling offers opportunities for children to revisit past experiences and build continuity. Carr (2002) highlights continuity in the form of assessments. She says that, "Documented stories connect with what went before, and construct a pathway of learning." (Carr, 2002, p.28). Even although Carr is speaking directly about learning stories, children's storytelling becomes a part of the documentation process and enables children and their families as well as teachers to revisit past learning and makes connections to enhance children's learning.

A Multimodal Approach to literacy

A group of writers interested in literacy, calling themselves 'The New London Group' (Prof. Courtney Cazden, Dr. Bill Cope, Prof. Norman Fairclough, Prof. Jim Gee, Prof. Mary Kalantzis, Prof. Gunther Kress, Joseph Lo Bianco, Prof. Allan Luke, Assoc. Prof. Carmen Luke, Sarah Michaels and Martin Nakata) met to discuss the state of literacy pedagogy. In their article, 'A pedagogy of multiliteracies; designing social futures' (1996), the authors attempt to broaden understanding of literacy and literacy teaching and to include a multiplicity of discourses. They argue that literacy pedagogy must now take into account the many forms of texts associated with information and communication technologies

Kress & Jewitt (2003) consider a multimodal approach to learning as one, which requires the whole range of modes (visual, written texts and audio), involved in representation and communication. "A multimodal approach to learning requires us to take seriously and attend to the whole range of modes involved in representation and communication" (p.1). Early childhood teachers therefore (along with teachers in other sectors) need to be able to recognise these range of modes and not dismiss as irrelevant just because it is not literacy, as they know it.

More recent writings speak of multiliteracies and are defined as "written-linguistic modes of meaning that interrelate with visual, audio, gestural and spatial patterns of meaning." (Cope, Fehring and Kalantas, 2002 p.1)

ICT is one of those multiliteracies. Guy Merchant (2005) has worked with a group of primary aged children in the U.K. The project "DigiKids: cool dudes and the new writing" comprises a group of children who are encouraged to set up email relationships with children from another school. The study explores the attitudes and practices of pupils that come to the fore when a closer look is taken at the relationships between new technology and literacy. Rather than teachers feeling challenged by emerging literacy practices and acting as if 'they do not exist' Goodwyn (2000,p.39 cited in Merchant, 2005,p.52). Merchant suggests an alternative approach for school-based teachers is to "build on pupil's experiences of digital literacy in popular culture, encouraging them to make connections between everyday meaning making and the school curriculum." In an early childhood context children are exposed to an ever-increasing range of technologies that can be used for different writing purposes. Digital story telling is one way of embracing rather than shunning emerging modes of literacy. I agree to some extent with Merchant's notion of building on children's everyday experiences in popular culture. What may be argued is whether popular culture for one age group is necessarily the same for another group but there are certainly crossovers. The retelling of stories, connecting storytelling to people, places and things, children's interest in email, faxing, and texting all develop at different times but the key is to be able to tap into and extend these interests for children there by building literacy understanding in an authentic way.

In a study conducted by Makin et al in 1999, 71% of parents included technology in their discussions about literacy learning. Technology included television, computers games and videos.

Siraj-Blatchford and Whitebread (2003) discuss eight general principles for determining the appropriateness of ICT applications in the early years; these guidelines were developed by "The Developmentally Appropriate Technology in Early Childhood (DATEC) project." The guidelines are as follows:

1. Applications should be educational
2. Encouraging collaboration
3. Integration and play through ICT
4. The child should be in control
4. The child should be in control
5. Application should be transparent and intuitive
6. Applications should not contain violence or stereotyping
7. Awareness of health and safety issues
8. The educational involvement of parents.

These guidelines give educators a clear framework to work with when they are considering integrating ICT into their early childhood setting. They allow teachers' practice to be underpinned with a pedagogy that is about children's learning, and to consider what is developmentally appropriate for the age group they are working with.

As I have worked through the literature it has become increasingly clear that in the New Zealand context little is currently written about sound pedagogical ICT practice in an early childhood setting. There are recommendations written on a national and international level in regard to what teachers should be doing with ICT. Patterson (2004) concludes that teachers need to develop an understanding of the teaching and learning environment in regard to ICT use and to be able to recognise the "potential that ICT has to enrich children's learning experiences" (p.30). Overseas, research suggests that there is a "pressing need for a more developed pedagogy for ICT use in pre school playrooms and for critical reflection on learning about and with ICT to become part of the professional discourse of practitioners." (Plowman & Stephen, 2003, p.38)

Vygotsky (1978) and Bruner (1986) identify the importance of the relationship between the skilled and the less skilled learner. Children are able to learn alongside one another, from each other and from adults who are able to scaffold and support children's learning. In an early childhood setting teachers work with children to extend on their interests and help them to get to the 'next level', incorporating literacy and ICTs into this scaffolding is a part of a teacher's wise practice. As Hill and Broadhurst (2002) point out however, teachers may have different experiences and knowledge with computers, children may be the 'experts' when it comes to working with technology and teachers need to be mindful of this and develop practice's where the teacher is not always seen as the 'expert' and that they can be the 'learner' too.

There is work underway however. One of the early childhood Centres of Innovation, Roskill South Kindergarten's research for three years (2004-2006) is examining: "How does the innovative use of ICT in pedagogical practice build community, competence and continuity?" This research is due for completion in July 2006 and will include innovative uses of ICT and practice underpinned by sound pedagogy. Roskill South recognise the important role ICTs have for supporting children's learning. "The computer, the camera, and other ICT resources (the photocopier, the laminator, the printer and the fax machine) in the kindergarten made this development (a tool for learning) possible." (Ramsey et. al, 2005, p.29)

The early childhood ICT literature review provides a source of up to date research on a national and an international level around ICT practice and thinking in an early childhood setting. Whilst computers are used extensively for "pattern recognition (31 percent), alphabet recognition (30 percent), or other types of games (33 percent)" (Ministry of Education, 2004, p.64) less than 6 percent used the internet, email, or allowed children to use the digital camera at home or in the centre. This reflects the need for teachers to develop their understanding of ICT in an early childhood setting.

Brooker (2003) speaks of the innovative use of ICT in individual schools and adds "In recent years, increasing evidence indicates that some of the most exciting and appropriate uses of ICT are to be found in early years settings, where there is less pressure to meet strict targets and more opportunity to experiment with child-centred practice" (p.262). New technologies have been integrated into early childhood settings in a way which supports children's learning, taking into account the holistic way children learn, this ensures that the use of ICTs are:

- Child-initiated and child-centred
- Exploratory and open-ended
- Supportive of social interactions
- Supportive of positive learning dispositions
- Supportive of equal opportunities for children's individual needs. (p.262)

Some of the documented practice in the primary and secondary sector can provide stimulus for what is possible in an early childhood environment. Professor Glynda Hull, University of Berkeley, California, along with Michael James cofounded an after school project known as Digital Underground Storytelling for Youth (DUSTY). This programme gave undergraduate and graduate students an opportunity to work with "African American, Chicano, Latino, and Cambodian youth from the West Oakland community. There they work, play, and create, using digital multimodal, multimedia literacies to cross geographic, cultural, socioeconomic, and semiotic divides" (Hull & James, 2004 p.2). Because the very nature of this work is so accessible it makes a powerful representation of children's lives. These QuickTime™ movies were shown to their families at a sharing afternoon in a local movie theatre. The work that was produced was particularly moving and made me think about why I was concentrating on written forms of text rather than having a broader approach to children's storytelling. Is it possible for early childhood children to be involved in producing work that incorporates a multimodal approach? The idea of using Powerpoint™ or slide shows that incorporate children's stories, digital images and pictures is an exciting one and one that is accessible to early childhood children and their teachers. Kidpix™ is a programme, which has the potential to give children the medium where their work can be viewed on a wider scale and can possibly incorporate the child's spoken word, video footage and other images as necessary.

Children's narrative

Oral language is the foundation for all literacy. Telling stories is a cultural event, it is a way of learning about one's culture, it is also a way of building a sense of who we are, as adults we remember events and share these with others in a narrative style. The same applies to children and their story telling, it is a way of making sense of their world, it also extends their world and it is through telling stories that children "develop a personal voice, a way of communicating their unique experience and view of the world." (Engel, 1995, p.1)

Narrative can be defined as "a story or an account of a sequence of events in the order in which they happened; the art or process of telling a story or giving an account of something; the part of a literary work that is concerned with telling the story." (Encarta, 1999)

Wells (1986) discovered after fifteen years of research that literacy is at the heart of school success and that it originates during the early years. It was apparent that the sharing of stories was the most important activity for young children. The telling and the listening to stories are just as important as sitting down and reading sentences in a book. Wells includes one caveat, "the kinds of stories children tell must be listened to and appreciated so that children can make use of those stories when they need to make the leap into literacy." (p.94)

In our early childhood setting the stories children have told (along with assessments about their learning) are available for revisiting in the child's portfolio which is accessible at all times. These portfolios have become literary artefacts, and children often choose their portfolio to 'read' over a book. With this in mind children need encouragement to tell their stories and to have an understanding that their work is valued and meaningful to others. Engel (1995) suggests that if "children are given encouragement and a responsive ear, they relish in making up stories of all kinds, a process that is vital to their daily lives and over all development." (p.22)

Scoter and Boss (2002) make the observation that, "When adults write down children's stories children see how the spoken word can turn into the written word. If children are given the opportunity to hear their stories again either read aloud by an adult or by revisiting their stories recorded in a digital form, then these activities as Scoter and Boss point out, "integrate all aspects of literacy; speaking, listening, reading, and writing. They help children develop their storytelling ability and an understanding of how sound translates into print." (p.43)

Malo and Bullard (2000) suggest that the child who is consistently exposed to an oral tradition of stories gains skills that prepare them for reading. In their paper, 'Storytelling and the emergent reader' they focus on the importance of adults telling stories to children, but their ideas and findings can be easily transposed to children having the opportunity to share their own stories and to have these stories reread to them. "Children who listened to stories told longer stories used more diverse vocabulary and story conventions. Children also learned in a very personal way that words are valued and shared." (Malo & Bullard, 2000, p.8) The writers want to encourage children to tell their stories and believe that this will assist children in literacy skills.

Recording children's narrative is an interactive event, between child and teacher, child and child, child and parent and "by making storytelling an interactive event we can help children feel comfortable enough in storytelling to be confident of their own emergent narrative ability, to take risks, to elaborate, to invent, to explore, and there by grow." (Trousdale, 1990, p.173)

Vivian Paley is an American kindergarten teacher who recognises the importance of storytelling for children. In her book, 'A Child's Work' Paley (2004) comments, "Educators who wish to place good talk at the top of any literacy list are more than matched in this desire by the children's own intentions. The need to tell one another a story exerts a tremendous pull among children, powerful enough to overcome shyness and the fear of the unknown." (p.58) Paley has been an influential and inspirational teacher to many early childhood teachers and as Carr (2002) comments, "Vivian Paley has taught us to trust the children, to listen carefully to them, to write down their stories, and to seek advice from them." (p.28)

Billy: a case study

[View Billy's stories](#)

Billy has been at Westmere Kindergarten for one and a half years and is a term away from school when I began my data collection. It became apparent just after Billy had started kindergarten that he was very interested in our digital camera and spent time exploring this medium by taking photos and then over time beginning to download photos and insert them into word documents. Documentation in Billy's portfolio is a rich history of his exploration of the camera and photo's range from snap shots of events, friends, and objects in the kindergarten environment to more composed photos taken with a definite purpose in mind. Documentation also includes revisiting of past learning and talking about the photos he has taken. His interest in ICT extended to include using the computer for other purposes, including emailing his cousin and the police to find out if it is illegal to wear your pyjamas on the street (and no it is not illegal, as long as they are in good taste and not showing too much of the person's body!) Learning stories share times when Billy has taken on the role of teacher, showing one of the teachers (Nadine) how to have thumbnail pictures of all the photos taken on the camera.

'Later on you came up to me and said, "Look, this is how I see all of my photos that I have taken.' I looked, and to my amazement you had on the screen a display of all of your photos, thumbnail size! I told you that I didn't know how to do this. "Oh, I'll teach you if you like," you offered. How kind. Billy, you are such a great teacher. You went through the process very slowly, and then once more to make sure that I had got it. Thank you Billy for teaching me a new trick on the camera.' (Taken from a learning story written by Nadine, in Billy's portfolio)

Nadine, in her learning analysis comments on the skill level Billy has acquired using the digital camera and that he often helps other children in their use of the digital camera, and through this he has developed a sense of leadership.

The teachers at Westmere Kindergarten selected Billy for my research because of his on going interest in ICT. Although Billy always has stories to share, he has not formalised this process in anyway by having his stories written down.

Over the first week at kindergarten I encourage Billy to tell me a story that I would type on the laptop, I suggested that he might like to take some photos to support his story, thus linking in Billy's camera interest. To begin with Billy declined to share a story and because my own philosophy is grounded in extending children through their interests I was comfortable with letting him do his own thing. After about three days of being at kindergarten Billy told me that he was going to tell me 'one story every day' (some of these stories are in the appendix 1). I give Billy my camera to take photos to support his stories, I show him how to use my camera, we talk about the different modes and Billy asks me about the movie camera symbol on top of the camera. I tell him I think it is for taking movies but I have not used it. Well within minutes Billy is back with a movie he had taken of children playing outside, showing me his footage, and explains to me how he took the movie.

By the beginning of week two, Billy has told me a number of stories; some are 'true life' stories while others are from his imagination. He has made a book also as he brought into kindergarten a plane that he wants to take photos of and tells a story to go with the photos. He then spiral binds it in to a book. Billy adopts the strategy of asking me to read his story back to him as he says it. I assumed it was because he wanted to make sure it made sense and to check where he was up to as this is a technique other children often use, I asked him why he was asking me to read his story back to him and he tells me, he was checking to make sure I got the story right!"

At the end of the second week I offer Billy my camera for the weekend, and suggest he might like to make a book or a slide show using Kidpix and the photos he takes. I show him some of Glynda Hull's work. He is very interested in this and wants to have a go at making a Quick time movie right away. He takes photos of his friend Harry, we make these into a movie, and Billy speaks into the laptop microphone and talks about his friend. This takes quite a bit of perseverance on Billy's part, as the microphone does not pick up Billy's voice very well. In the end we go into the office and Billy shouts into the computer, "Hello, this is my friend called Harry, and I play with him a lot and I like him, and I really play with him. Thankyou. Billy." Billy then has an idea of what I mean by making slideshows and/or what we could do with his photos. I have in my mind that he might take

photos of things that are of importance to him, like his house, or letterbox or bike or street or family etc. What comes back to kindergarten is very obviously of importance to Billy, but it is very different to what I thought would happen! The camera battery is flat and Billy says to me, "I think I have taken about 101 photos and there are a few video's in there too!" What Billy has taken are small movie clips of his weekend, beginning with a trip in the car, followed by a visit to a shop where he filmed the shopkeeper, his mother shopping and his brother and friend. Footage of Billy pretending to be a plane while holding the camera showed the versatility of the size of the camera. Billy took footage of his mother singing in a choir and this footage was quite extraordinary, as the church where the choir was singing was dark and lit only by candle light, so the movie is of this candle light accompanied by the beautiful sound of the women's choir singing, "My Lord what a morning". Absolutely stunning! How amazing to have the opportunity to record this, the footage Billy took has been seen by another choir member also! The next section of footage was of the floor and carpet and legs of chairs and couches and legs of people, Billy explains to me that he has put the camera on top of a remote control car and taken a movie that way. I ask him where the idea had come from and he tells me, 'from home alone three' Of course!



Stephen, Billy's father explains to me later, that he had got up on Sunday morning to see the camera on top of the remote control car and initially told Billy and his brother to be careful and then on reflection suggested securing the camera on top on the car with a large rubber band. Eddy, Billy's older brother who I had had previously at kindergarten sent me an email with a video attached of the car with the camera on top. He said to me,

"Dear Jo, this is a video of Billy driving my remote control car. We watched the movie on the camera it was fantastic the car hardly crashed! We hope you enjoy it. We will try to put it on a disc so you can watch it yourself. Love to hear from you. Eddy."

Billy continued to take photos and to publish these in various forms, one of his favourite photos are to take images of himself and he has ended up with many self portraits in his portfolio. Billy is initially not that keen to do any thing with the photos he had taken until I manage to source a small portable microphone and this renews his interest in working with his footage. This is also fuelled by observing interactions I am having with other children using the microphone.

I watch while Billy works with one of the other teachers (Nadine), telling a story about a hot air balloon he has made. Nadine supports Billy whilst he downloads photos he has taken to support his story. He puts the camera into the USB socket, opens the camera in iphoto, selects the photos he wants to export and then systematically works through to insert all of his photos. The story is then printed out and secured with staples.



After Billy had completed this story he asks if he can use the microphone to record his voice, and so began the process of recording his voice for the photos and movies he has taken at home. This process takes a few days and Billy speaks straight into iMovie and talks about each of his photos. He experiments with his voice, at times speaking very loudly and at other times using a quieter voice, at the end of just about every clip he says, 'and that is the end of my story. Goodbye.' He is very interested in the process we are using and once his movie is completed he watches it a number of times.

The following week Billy works on his video clips. After a lot of experimentation the easiest programme to use to view his movies, turns out to be PowerPoint and I have inserted each of his clips into this. Billy listens to each clip with the headphones on and tells me what to type about each clip, or not type as the case may be as some of the clips he says, 'no just leave that one' and others he says, 'no, I want to say some thing about that clip.'

Since finishing my research at Westmere Kindergarten Billy has continued his ICT journey and during the first week of term three I received an email from Billy's Dad with a photo attached. Billy had taken it on Waiheke Island at a café and it was of a woman with her dog on her lap giving her a big lick! Billy knew the person and took her photo and individual portrait photos of every person at the party in the café on that day.

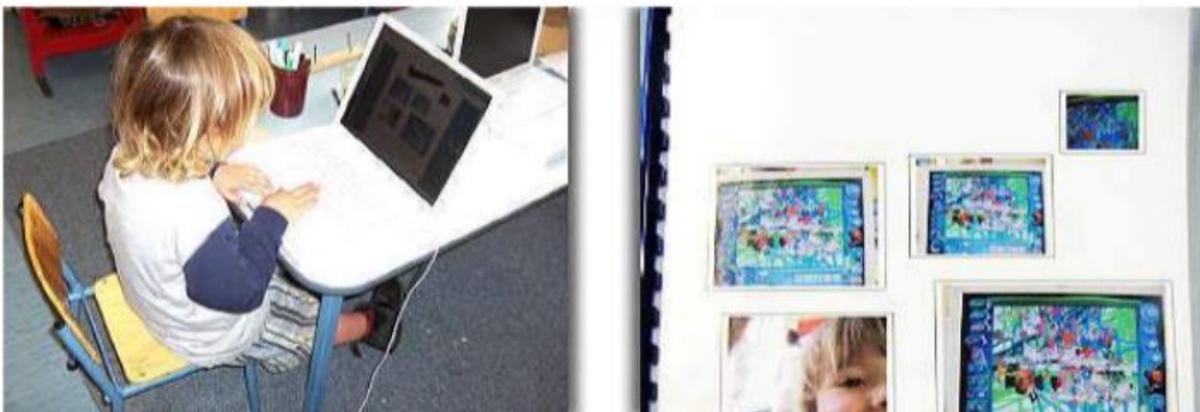
Casper: a case study

View Casper's stories:

- [File 1](#)
- [File 2](#)
- [File 3](#)

Casper started kindergarten in April 2004, when I begin my data gathering he is four and a half and has another six months at kindergarten before he begins school. Casper has an amazing sense of humour and has been keen to share stories by way of conversation with the teachers. The teachers at Westmere kindergarten suggested Casper as one of my research children because of his story telling interest. Casper's portfolio has many examples of the stories and conversations he has had at kindergarten and is building an image of Casper as being a confident and capable learner. One of the early stories he shared was a story called, 'The boy who's mother was a pirate' based on the book by Margaret Mahy, 'The man whose mother was a pirate.' In Casper's story his mother is called 'drink bottle' and is an example of the imaginative mind Casper has.

When I begin my research Casper has begun to use KidPix and to tell stories which become a recurring theme for him, stories about 'Mr Long Blong Blong' or a name with a similar sound. I begin to work with Casper using KidPix and show him some of the tools and what to use them for. He begins by drawing pictures using the drawing tool and then I show him how to save his picture in a slide show, so Casper does this and quickly remembers. By the following week this has developed further and Casper makes a book, with the help of Fran, one of the teachers. He types the words himself, then uses KidPix to draw his pictures and inserts them into a slideshow, then, he photographs each of his pictures and these are made into the cover of his book.



Over the next two weeks it has become apparent that Casper is interested in the design aspect of his stories and the next story he tells, Fran types, and Casper wants all of the words to be in rainbow colours! In other stories he is very particular about the style, colour, and form of the word art he chooses.

The next week I watch as Casper works on a slideshow supported by Fran. Casper is able to move around KidPix with ease now, inserting frames into his slide show. While Fran was working with him he discovered the trash button and he asked how it worked. Fran told him you have to 'click and drag' it into the trash. Casper can understand what she meant by this and then spent time inserting and getting rid of frames from his slideshow, it must be pointed out here that Casper was using a lap top with out a mouse and clicking and dragging at the same time is not easy.



By mid June I have introduced the microphone at kindergarten and Casper wants to have a go at using it and asks me if he can sing a song. Casper has a love of funny noises and made up words. When using the microphone he is able to record many of these, and interwoven in this were the words of his song. After he had finished and we had listened to his song, he asked me if I could download his song and text them so they could be on a cell phone as a ring tone!

The following day Casper and I worked together to edit his Garage band song; he continues to pick up very quickly the steps needed to insert photos into an iMovie show.

A few days later Nadine, one of the teachers, was working with Casper and she wanted to extend his story telling by using the microphone, Nadine told Casper that I had just taught her how to use it and that she still was not completely sure how to use it. Casper said, "Jo has shown me how to use it too, and Garage band, and iMovie so I can show you if you don't know. Would that be helpful Nadine?" Nadine writes in Casper's learning story, "This showed me just how much of a competent and capable learner Casper is becoming through this interest. Casper is being empowered to take charge of his own learning, as he is in an environment where play and exploration is being seen as important, and where his interests are left to 'bubble away'."

The following week Casper asks if he can tell a story into the microphone, which I say yes too and before I get to the lap top Casper is there with garage band open and a track selected to begin to tell his story. Once this is done he asks if he can add some instruments to the story, and he chooses, drums. We listen to a variety of different drum-beats and sounds and he finally settles on classic rock beat, the next instrument he selects is an acoustic guitar and again it is in a classic rock beat. Next he chooses groovy electric bass and a synthetic bass in an 80's dance style. In between selecting each loop we have listened to each track and Casper has learnt how to select and paste in loops to go with his story. After we have inserted the synthetic bass track Casper asks if he can delete his story and sing a song instead, which he does, he sings, 'Smoke on the water', a song that Casper has chosen to sing at other times at kindergarten and one that he obviously enjoys.



When we have finished I put the completed song on a disc and we try to play it on the stereo but it won't go, and then I remember that the song has not been exported to iTunes, so it is back to the lap top to save it in a format that can be read on the C.D player.

I asked Casper afterwards about the process we had just completed,

"First I played the song. I got lots of instruments on the computer garage band, drums, guitar, and bass guitar and that's about it. Then I singed through the microphone and sang 'smoke on the water'. Then we played it and then it wouldn't let us play it. Then we tried to play it. It wouldn't go on the stereo, how annoying! So we exported it to iTunes and then it worked."

I asked Casper what he thought when he heard his song on the stereo, he told me he felt happy and that he was going to play it at home.

Recently the kindergarten has just purchased a new G5 computer and Casper is keen to have a look at it, it has not been unpacked yet and Casper is looking at it in the office with Nadine. Casper looked at the picture of the computer on the box, and pointing to each icon, exclaimed; "Yes! It has iphoto. Yes! It has iMovie. Yes! It has Garage band!"

Casper has a very excited look upon his face, and then suddenly asked, a little worriedly, "Well is this computer for only the teachers to use? Or can the children use it too?" Nadine assures Casper that it is a computer for both the children and the teachers and that she will let him know when it is up and running.

The final two stories Casper writes as a part of my research data gathering (although it will be far from his last) is another story he tells while working with Nadine. It is another story about Mr Boing Boing, and Casper begins to tell his story and then clicks stop and exclaims, "Instrument" Nadine asks what Casper is doing and he tells her that his story has to have an instrument sound in it, he chooses drums and goes through a variety of beats and selects the drum beat and adds it to his story. Casper added a few more drumbeats into his story, exclaiming, "Instrument!" each time. This story was supported by drawings that Casper had done and then he took photos of each one, these were then added to his iMovie with the story and made into a quick time movie for Casper to take home. The last story is one that Casper types himself, Nadine has written the story for him as he dictates it to her and then he types it himself.

'Once upon a time there was a bear called Casper and Tess and boy Casper came up and said go away. The bear was really angry and he bited them. Tess and Casper rang the bear police and they taked the bear to jail'.

Chloe: a case study

[View Chloe's stories](#)

Chloe has been at Westmere kindergarten one year and two months when I begin my research and is six months away from starting school. Chloe was suggested as a participant by the teachers at Westmere Kindergarten because of her love of story telling, she has an ongoing interest in story telling, writing and using the laptop. Her portfolio records times when she has used the laptop and the digital camera. One of the first times Chloe used the laptop and camera was to photograph a painting she had done. She also requested the teacher take photos of her as she flipped on the monkey bars. The teacher and Chloe then worked together to download and insert the photos into a word document. Chloe then typed the words she wanted to go under her photos. She wrote, "Here I am on the monkey bars and jumping on the boxes. I did all the typing up there, even I did the numbers." The teacher commented on how much Chloe had remembered from the previous term as far as using the computer went, this included using different functions such as the space bar and the delete key showing how confident and capable Chloe has become in her computer use.

During the first term of 2005 Chloe's interest in story telling began to develop and included lengthy titles and stories with reference to familiar books. Her stories included 'the lion and the very magic queen' and 'the little mouse, the king and the princess and the Gruffalo'.

For the first week of my research I asked Chloe if she would like to share a story with me but always she was too busy at other things and told me she would tell a story later. I didn't want to put pressure on Chloe at all and thought that she may not in the end be one of my case study children, but the very next day Chloe asked if she could tell me a story. Chloe's method of story telling was to think first for some time and then tell a part of her story and then ask me to read it back to her and then tell me the next part. This story was called 'Little Red Riding Hood' and had some differences to the traditional story, Granddad lived in the same house as Grandma and they had two children both called Little Red Riding Hood. Even though Chloe had at other times used the digital camera and laptop she was not interested in using the laptop herself or the digital camera to support her story. Rather once it was finished we printed out two copies, one for the wall and one for her portfolio and she drew on each of these a picture relating to her story.

Chloe has been telling some amazing stories while one of the teachers writes them down for her on the laptop. To extend this further I wondered about using a microphone to record her story directly onto the laptop. I discussed this idea with Chloe and she was very keen to give it a try. We had to go into the office to record as the kindergarten was very noisy and the microphone picked up all of the other children's chatter and it made it hard to hear Chloe. Chloe always has to think about her story, before telling it, it is as if she has to get the whole story complete in her head before she shares it with others, as she sits and thinks she tells me, "I've got the second part, I haven't got all of it in yet." She thinks a bit longer saying, "O.K, I'm just going to think about it some more." She thinks some more and says, "O.K, I've got it, I've got it."

As Chloe tells her story she asks to listen to each part and at the end she asks if we can spiral bind it, a process Chloe has done on many occasions when recording her story. I explain to her that we have recorded her words and that it is not written on the computer anywhere and offer some suggestions of what to do next. The idea of taking photos and making them into a movie appealed to Chloe and we decided to work together on this the next day.



The next day we found all that was needed in the containers in the block area and then we listened to her story again and Chloe realized that she needed some more characters and went to find them. I had found a large sheet of green felt like material and I put this down first and Chloe set the animals up for each scene. For each scene Chloe listened to each segment and then when she was arranging the characters she would retell that part of the story and then photograph it. While Chloe is setting up each scene she retells that part of her story, takes the photograph, then listens to the next part of her story, and sets that scene up. I am not sure how often Chloe has used the digital camera as she requires support initially from me to take the photos and at one point during the photographing she asks if I will take one photo and she will hold an animal that wont stand up. After she had finished Chloe tells another story with similar themes to her butterfly story.

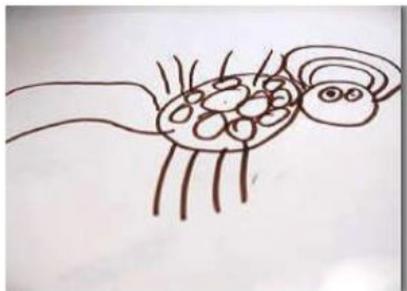
As the process of making movies out of stories was fairly new to me I told Chloe that I would make it into a movie for her at home and give it to her on a disk, when I gave this disk to Chloe she took it home and listened to it on her computer with her father and afterwards asked if she could write her own 'learning story' about it, she wrote 'my stories are great Jo.'

The next story Chloe tells is the ' Queen and the King and very Naughty Cat' Chloe and I have a long discussion about how she wants to make this movie, whether she wants to take photos of objects or draw pictures. It was nearing the end of the session and I suggest to Chloe that she might like to take the camera home and take some photos there to go with her story, another long conversation ensues with Chloe thinking about this possibility and in the end deciding that this will not work as she does not have all of the props she wants at

home, In the end she thought drawing pictures would be a good idea, I was not going to be at kindergarten the next day so we enlisted the help of Nadine (one of the teachers), and she said that she would help Chloe in what ever she required.

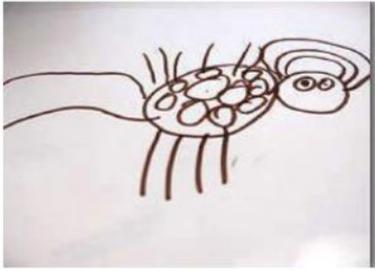
The Queen and the King and the very naughty cat

When I came back to kindergarten there were a number of pictures that Chloe had drawn and we worked together to photograph these and then put these photos into iMovie along with her recorded story, I supported Chloe while she downloads her photos and inserts them into her movie. This completed we were able to put her work onto a CD so Zoe could share her story with her family.



"When the Queen was in her castle drinking her coffee and the king was out with the cat, the very naughty cat. The King said, "I should of stayed home and the queen could of taken the cat because there are prickles out here." When the King was out he saw a big fat mouse was in there and the King said, "I don't think you should come and pat him, my cat can bite you, he has sharp teeth and sharp claws and sharp claws on his toes. And the King said, "I think I had better go back home, I am not going to see you every again." So he went back home and he knocked on the door and the Princess went down the stairs and opened the door. "Oh, you're here King, come inside. But when the naughty cat ran upstairs he drank the Queens coffee! When the King and Princess were inside they thought they go

have some lunch at the park, so they did, but it was starting to rain so they didn't and that was the end."



Harry: a case study

[View Harry's stories](#)

Harry started at Westmere Kindergarten in January 2004 and when I begin my research is three terms away from starting primary school. Harry knows a lot of things, a lot of factual things about the world, his portfolio shows many occasions where Harry has shared information about things he knows. His mother, Danielle has contributed to his portfolio and shared many learning experiences for Harry at home. Harry has a strong interest in books and likes to share information he has gathered from them, in his portfolio there are times when he has used a book to draw from, drawing a creepy bug, from Wombat Stew. Danielle has commented in one of her Parent voices that 'Harry enjoys playing around with words and asking if certain words rhyme, and gets great delight from making up rhymes and songs and just messing around with words. It is a lot of fun'. This love of words is obvious in some of the poems Harry has told,

'Little crocodile,
In the river bank
Waiting for his food
And a drink.
Then he found his food Which was a fish
And then he found
His drink
Which was a drink of water.'

Harry has an obvious disposition of perseverance and this comes through strongly in the analysis of learning stories in his portfolio.

Harry was selected by the teachers at Westmere kindergarten as one of my research children because of his interest in word play and he was at that time beginning to share stories. The first story he told was a factual story after reading a Dinosaur book at kindergarten, and then he wrote a book himself after being asked by Nadine (one of the teachers) if he wanted her to type it

on the laptop or write it himself. Harry has been writing some words and numbers more or less since he began kindergarten. 'Dinosaur Rumble' was the title of the book and then Harry told Nadine that the story needed to have 'it' in it because he knows how to write 'it'. On the first page is 'it is a dinosaur book'. The book was completed and spiral bound. Nadine comments of Harry's ability to set himself a task and see it through to completion in the learning analysis of the learning story she wrote.

When I begin my data gathering Harry is not that keen to tell a story, not wanting to put pressure on him at all I left him to come to me if he wanted to, I knew that this was an interest for Harry so I did ask him a few times but to begin with he declined. Towards the end of the first week Harry said he wanted to write a story and he did, this was a story based on facts he knew about going on holiday to the beach. His next two stories were a very similar style, another story about the beach and then a story about the jungle. The longest story he wrote at this time was a story he dictated to his mother at home about a star baby.

At the beginning of June four new soft dogs arrive at kindergarten, a blue, green, orange and purple one, Harry takes a liking to the orange dog and names him Fergus and he is able to take him home for the weekend. On the following Monday Harry's mother suggests that he might like to write a story about Fergus, Harry likes this idea so Nadine works with Harry to record his first story, 'The Space Dog called Fergus'. After Harry tells his story he asks Nadine if he can take some photos of Fergus, which he does. First he has to make a space ship for Fergus and then takes the photo of Fergus in the spaceship. In the story Harry tells Fergus lands on 'one black rock beach' so Harry comes up with the idea of photographing Fergus in the empty water trough and the plug hole is black so Harry takes a photo of that too, to represent the one black rock. Nadine and Harry discuss what he would like to do next and Harry says he would like to make a chapter book and that he has already thought of the title for his next story, Fergus goes diving. A few days later Harry tells his Fergus goes diving story and again makes props and photographs Fergus 'under the sea'. Nadine and Harry talk about other stories Harry might like to tell for his chapter book and this is the list he comes up with;

Fergus goes inside a volcano Fergus goes to volcano land Fergus goes to the zoo Fergus plays tiggly with a tiger Fergus climbs a mountain Fergus goes to the jungle.

The next story Harry tells is 'Fergus goes inside a volcano' and he tells Nadine that he will talk about his other stories in each story he writes and this is what he does, linking back to the previous stories he has written. The next story Harry tells is the next day and is called 'Fergus goes in an ambulance' which is not on his list of stories to tell but he has decided that he wanted to write a different story. He had to think hard about what to use for an ambulance for his props and in the end decided to make one at the art collage table. When he had finished taking the photos Harry downloaded them, with Nadine talking him through the process. When they were downloaded Harry made the text boxes in to the sizes he wanted and inserted them into his story.

Two days later Harry tells his 'Fergus goes to Volcano land', this story required Fergus to be photographed in the sandpit.

The next day Harry told two stories, 'Fergus goes to the zoo' and Fergus goes ice-skating and then Nadine and Harry looked at what other stories were left on his list, and there were three more stories to write. Harry had a couple of days break and then wrote 'Fergus plays tiggly with a tiger' and then on then two days later he wrote 'Fergus goes to the jungle'. Then finally nearly four weeks after he had begun Harry decided to write his tenth and final story, 'Fergus goes fishing'.

After the holidays almost a month to the day that Harry began his Fergus chapter book he is ready to publish it. He works again with Nadine who has supported him through out this Fergus story telling process. Harry says that the most important thing about the title page has to be his name as he wrote the book. Next the title of the book, 'Fergus Stories', and then Harry decides after looking at another book that his book needs a contents page and that his stories need to have page numbers. Once all the numbers are written on their pages, Nadine and Harry work together to write the titles in the contents page, Harry telling Nadine the title of each story and the page number, Harry's book is then spiral bound and it is finished.

The last piece of data to include in Harry's case study is another poem entitled 'Pesky Rat' The poem came about after Harry had painted a picture of a rat using grey P.V.A. glue

That Pesky Rat
That Pesky Rat
Eating everything in the fridge,



Eating everything on the stove,
Eating, eating, until he gets so fat!

That
Pesky
Rat!



Kylie: a case study

[View Kylie's stories](#)

I meet Kylie for the first time during term one of this year as she started kindergarten after I left. She has just turned four so is a year away from starting school. The teachers suggested Kylie as one of my research children because of her love of story telling, Kylie always enjoyed conversations with the teachers and over the first term this developed into telling stories. Kylie's portfolio has stories Kylie has told as well as clearly building an image of Kylie as a capable and competent learner.

For the first week of my research Kylie was away but when she came back to kindergarten she was keen to record her stories. The first few stories were all to do with her family and experiences they had shared together, going to the park etc. Kylie told me that she could write her name and her sisters so in each story that I typed Kylie would type 'Kylielucy'. I showed Kylie how to type 'and', and to use the space bar and then she would type 'Kylie and Lucy' and say while she was typing, "Kylie, space, and, space, Lucy".

The next step for Kylie was that she wanted to type all of her story herself so we began with me telling her how to spell the words that she needed and moved quickly on to me writing down the words of her story so that she could type them.

Kylie at the same time was very interested in using Kidpix, Kylie is a very accomplished artist so the idea of Kidpix appealed, as she was able to draw and type her story and save this in the form of a slide show. We put voice options onto her text so that the story could be read aloud by the computer-generated voice.



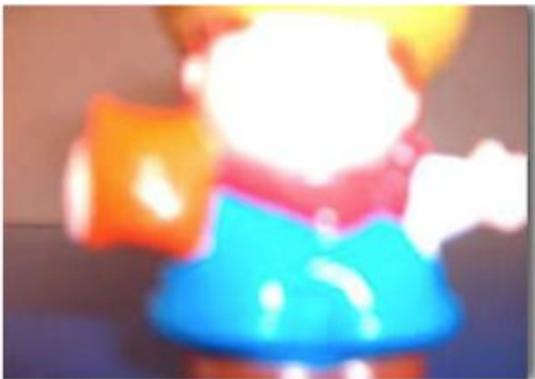
Kylie is very competent at finding her way around the keyboard, she is able to recognise letters easily and remembers functions, like space between letters and 'takeaway' for delete. She experimented a lot with the hose button on Kidpix and was

able to hose away her pictures or things she did not want to save. As time went on Kylie wanted to explore Kidpix further and I was able to show her how to change colours, as she works she talks to her self about what she is doing, 'Its like a big pink blanket' and 'Now to hose again and click and hose'. Each time she uses another tool she talks herself through the process. I guide Kylie through the colour changing process one more time and after that she is able to do it on her own. Kylie is able to find her way around KidPix now and is doing this with ease, the process is supported by the fact that her mother has bought her KidPix for the home computer.

When Kylie is finished with KidPix we go into the office to record a story using the microphone, she begins by saying 'once upon a time, Kylie and Lucy went to the park', and then she asks me if she can hear it and this is a technique she uses through out her story telling. After she has told her story, about her family going to the park we listen to what she has said. Kylie asks if she can add more to her story and when we play it back she says, 'can we take away, when Mummy came home' because I couldn't hear it, it didn't sound right'. When we have finished editing her story Kylie asks if I can print out all of her words and I have to explain to her that we cannot print out her voice so we discuss other options for her recorded stories. The next story Kylie told was one about a butterfly who got stuck in a tree, went to a park, and then amongst the story were parts of 'The Very Hungry Caterpillar'.

As Kylie gets more familiar with using the microphone she experiments with her voice, saying words really slowly, or really quickly, or over and over again or really loudly or so fast the words all roll into one and make her laugh.

After working with Kylie for about three weeks she recorded a story using the microphone called 'On the farm' and she decided to take my camera home with her to photograph animals and a barn that she has at home. When she brought the camera back in the next day she told me that she had taken lots of photos and that she would need the end taken out of the story she had recorded yesterday as she needed to add some more to it. Once this was done Kylie and I worked together to download and insert her photos into iMovie.



Kylie had taken a lot of photos and we worked together to choose the ones that went with her story. We listened to each part of her story and inserted it into the movie, we then used the 'Ken Burns's' effect, which gives the illusion of movement and enables specified viewing time for each photo. I had shown Kylie how to insert her photos into the timeline of iMovie and explained about the little cross that came up when the photo was in the right place so Kylie was able to insert her own photos. Having explained this Kylie was able to complete her movie. After this was completed Kylie asked if she could record a song about her story, which she did and then we talked about, assign some instruments to her song. Kylie chose the drums 80's style, but I couldn't get it to work so we decided to revisit this when I had it sorted, which I had done by the next day, so Kylie was able to continue to work on her song. I showed her how to copy and paste a loop of music and she was able to complete each one, her song now having, piano, vocal and drums. When we listened to the song that Kylie had made she was not happy with the mix, she thought the drums could not be heard very clearly. We listened to it again and she was right, the drums were very quiet, so we adjusted the noise levels and listened to it again and this time Kylie was happy. We burnt Kylie's work to a disk so that she could take it home and share it with her family.

Data Analysis

[View data analysis report](#)

For this report I will be analysing the five child case studies described in the findings section using a combination of two frameworks the first is the dispositional framework from the assessment framework known as Learning Stories (Carr, 2001) and

the second is Carr's framework in Kei tua o te pai (in print). For this framework Carr combined the ideas of Luke and Freebody and Barbara Rogoff (2003), for this resource. In this resource she defines the framework as follows:

Being a participant in the cultures' symbolic systems and technologies for making meaning could be described as four different ways of participating. Luke and Freebody (1999 p.7), writing with a focus on 'reading' texts at school, argue that as well as 'breaking the code', 'reader practices' include three further interrelated practices. These are: making meaning from and producing written visual and spoken texts, language, symbols, stories, pictures and sounds (being a participant); knowing about and acting on the functions of various texts (being a user) and finally, being able to critically examine and redesign texts (being an analyst). (Ministry of Education, in print)

Learning stories are an assessment approach that many early childhood teachers use to document children's learning. What is different about the learning story framework is that they take a narrative approach to documenting learning; they include the adult working with the child in the assessment; objectivity is achieved through multiple voices – teacher, child, parent; teaching as well as learning is documented; progress as well as children's strengths and interests are highlighted. Underpinning learning stories are the dispositions of "Taking an interest, being involved, persisting with difficulty, communicating and taking responsibility. Carr (2001, p.21) describes dispositions as participation repertoires from which a learner recognises, selects, edits, responds to, resists, searches for and constructs learning opportunities." She also describes them in terms of being, 'ready, willing and able to participate in various ways.' The learning story framework "presupposes that developing these dispositions is at the heart of 'wise practice in early childhood education and therefore most worthy of assessment.'" (Hatherly and Sands, 2002, p.11)

The following criteria used in the analysis of the children's cases is not about a hierarchy of skills, but is based on social practices with ICT, and thus better fits a sociocultural framework rather than a skills-based framework.

Listening in and watching – taking an interest
Participate in meaningful projects using ICT – being involved
Playing – persisting with difficulty
Breaking the codes communicating
Critique and redesign – taking responsibility

There are two main lenses to be used to look at Carr's framework in relation to the case study children. The first is an ICT lens and the second is a storytelling lens – each of which I will deal with separately. I will then address my three guiding research questions;

What is the process whereby ICTs may assist some children to tell more complex stories?
What is the process whereby ICTs may assist some children to use storytelling to make connections with what they already know and with prior experiences?
What is the process whereby ICTs may assist some children to tell stories with continuity of ideas?

and analyse these first under one lens and then under the other. Initially I was going to look at an ICT lens only but it became apparent that I also needed to analyse the early literacy component of the children's story telling.

Discussion:

Children's storytelling has been influenced by learning stories, the assessment framework used by many teachers in a New Zealand context. The narrative style of learning stories provided a way of assessments being accessible to children and to their families/whanau. The storytelling nature of the learning stories and the opportunity for children to have their own voice heard through the use of the 'child's voice', led to an interest in telling their own stories. The added component of ICTs allowed children a great deal of autonomy in telling, archiving and listening to their stories.

ICTs enhanced the storytelling practices of the case study children at my kindergarten. The desire to tell their stories, to communicate their ideas independently of text conventions led these children into a greater experimentation and exploration of ICT. How ever it was hard to tell from my research whether the desire to tell more complex stories led to more complex uses of ICT or whether the desire to use the ICT's led to complexity of children's stories.

Greater experimentation and exploration with ICT led to more complex understandings about what purpose the ICTs could be used for stories increased in complexity when ICTs were introduced, the length of the stories and the time and perseverance required to complete work increased.

Stories were enhanced when a reason for telling stories was found or an interest was built on. There is a marked difference between the stories some of the children told before an interest developed in either telling stories or in the use of ICTs, or finding an interest to tell a story about. Building on a child's interest supports sociocultural literacy by engaging in everyday practices, "children learn about literacy as they engage in everyday practices in a range of social and cultural contexts within their families and communities." (Luke, 1993) One of my indicators of connections is 'do children make connections with popular culture', if children are able to make connections with people, places and things in their lives this will provide the opportunity for children to widen their literacy learning and weave this into their daily lives in an authentic way.

The five core principles for literacy development identified by Arthur and Makin (2001) that underpin good literacy practice are visible in the work I did with children. Siraj-Blatchford and Whitebread's (2003) eight principles for determining the appropriateness of ICT in the early years have been considered and have led to successful ICT integration. The literature suggests teachers develop sound pedagogies around the implementation and use of ICTs in an early childhood context. Even though there are early childhood centres using ICTs in an innovative way supporting children's learning, in a New Zealand context, there is little documented around this use. When considering and developing philosophies around ICT integration these principles by Arthur and Makin (2001) and Siraj-Blatchford and Whitebread (2003) can guide teachers thinking and lead to sound pedagogical practice around the use of ICTs.

I believe giving children the opportunity to record their stories was one way of weaving literacy practice into the lives of early childhood children in an authentic way. Children were interested in sharing their stories because they were of significance to them. What has happened for many children over the four years I have been involved in the recording of their stories is that when children have the opportunity to record and share their stories they see the purpose of print in an authentic way and are learning the functions of text. The recording of their stories has often led to children wanting to write their own stories and there are examples of this in my case studies with Casper and Kylie wanting to take over the writing of their own stories. The teacher has written the story and then the child has copied the story down either handwriting or typing their story. It is my belief that one way of encouraging children's understandings of the purpose of text is to do so in as authentic way as possible, so that it is meaningful to the child.

Merchant makes the plea that in order to explore the complexities of new technologies and literacy what is needed is "more classroom-based research that explores the attitudes and practices of pupils and teachers – work that can help us to develop a clearer understanding of the relationship between new technology and literacy" (Merchant, 2005, p.51). I believe my research and work with children at Westmere Kindergarten has given me a clearer understanding of the relationship between new technology and literacy and in using ICTs as a vehicle for supporting children's learning. I also believe that this research has the potential to add to teacher's knowledge in early childhood and the primary sector about the power of children's storytelling and literacy development. Children's literacy now must be viewed with a multimodal lens one that recognises less traditional forms of literacy; the use of computers for instance is one way of supporting children's literacy development. Cultural tools relating to a child's life support the sociocultural nature of Te Whāriki, the early childhood curriculum by working with and building on a child's interest.

Focussing on, complexity, connections and continuity for this research project has provided the opportunity to see how using ICTs with a purpose in mind, can lead to deeper understandings around the use of ICTs for children. It is evident that having the opportunity to record their stories over time has exposed children to literacy in meaningful contexts.

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