
New forms of an old art— children's storytelling and ICT

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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 Internet and communication technology (ICT) has increased and this has led to seeing how ICT can fit in the early childhood setting in a meaningful way. Initially, the children at Westmere worked on an old computer, with the equipment being upgraded as funds permitted. Today we have two iBooks (Apple Macintosh laptop computers), a G5 iMac (Apple Macintosh desktop computer), two digital still cameras, and a video camera for the children to use. Children also have access to the photocopier, the laminator, and a spiral binder.

Sitting alongside the children's and teachers' interest in ICT is a long tradition in storytelling, which came about through the use of Learning Stories. The narrative style of these made children's assessments accessible not only to parents/whānau but to the children as well. Over time children became more familiar with the storying nature of documentation and, through the use of the "child's voice", children began to tell their own stories and share their experiences.

During 2005 I was the first early childhood e-Fellow, in a programme funded by the Ministry of Education that provides paid release for teachers to research an area of e-learning. My research partner was Professor Margaret Carr from Waikato University. My research took into account my long-term interest in children's storytelling. My major research question—"Can ICT enhance the complexities, connections, and continuity of young children's storytelling?"—gave me the opportunity to explore in depth the storytelling of children and to investigate ways of extending this interest through the use of ICT.

This research took place during Term 2 of 2005 at Westmere Kindergarten, where I had worked for many years and so had already developed relationships with the children, whānau/families, teachers, and the wider

community. I worked with five case-study children, all over 4 years of age, who attended the morning session. The children were selected on the basis of their interest in storytelling, identified through the kindergarten's assessment practices. Therefore, the research was driven by the children's interests rather than from adults' perspectives.

In this article I share the story of one of my case-study children, Casper. Many children in the kindergarten shared his interest in, and development of, storytelling and the use of ICT, not just those involved in my research.

Casper's story

Casper started kindergarten in April 2004. When I began gathering data for my research study he was 4½ years old and had another 6 months to go at kindergarten before he began school. Casper had an amazing sense of humour and was 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 interest in storytelling. Casper's portfolio has many examples of the stories and conversations he had at kindergarten and builds an image of him as a competent and capable learner. One of the early stories he shared was a story called "The boy whose mother was a pirate", based on the book by Margaret Mahy, *The Man whose Mother was a Pirate*. In Casper's story his mother was called "drink bottle".

When I began my research Casper had started to use Kid Pix¹ and to tell stories that became a recurring theme for him, stories about Mr Boing Boing or a character with a name with a similar sound (Mr Bong Pop Corn, for instance). I worked with Casper using Kid Pix, showing him some of the tools and how to use them. He began by drawing pictures with the drawing tool. I showed him how to save his picture in a slideshow; Casper did this, learning quickly. By the following week this had developed further. With the help of Fran, one of the teachers, Casper made a book. He typed the words himself, used Kid Pix to draw

his pictures, and inserted them into a slideshow. Then he photographed each of his pictures and these are made into the cover of his book.

Over the next two weeks it became apparent that Casper was interested in the design aspect of his stories. When Fran typed the next story he told, he wanted all of the words to be in rainbow colours. In other stories he was very particular about the style, colour, and form of the word art he chose.

During the next week I watched as Casper worked on a slideshow, supported by Fran. Casper was now able to move around Kid Pix with ease, inserting frames into his slideshow. While Fran was working with him he discovered the trash button and asked how it worked. Fran told him he had to “click and drag” it into the trash. Casper understood what she meant by this and spent some time inserting and getting rid of frames from his slideshow. It must be pointed out here that Casper was using a laptop without a mouse, so that clicking and dragging at the same time was not easy.

By mid-June I had introduced a USB² microphone at kindergarten. Casper wanted to have a go at using it and asked me if he could sing a song. He had a love of funny noises and made-up words; using the microphone could record many of these, interweaving them with 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 it so it could be played on a cellphone as a ring tone.

The following day Casper and I worked together to edit his GarageBand³ song; he continued to pick up very quickly the steps needed to insert photos into an iMovie⁴ show.

A few days later Nadine, one of the teachers, was working with Casper. Wanting to extend his storytelling by using the microphone, Nadine told him that I had just shown her how to use it but she was still not completely sure of what to do. Casper said: “Jo has shown me how to use it too, and GarageBand, and iMovie, so I can show you if you don’t know. Would that be helpful, Nadine?” Nadine wrote in Casper’s Learning Story:

This showed me just how much of a competent and capable learner Casper is becoming through this interest. The following week Casper asked if he could tell a story into the microphone, which I say ‘Yes’ to, and before I get to the laptop Casper is there with GarageBand 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 listened to a variety of different drumbeats 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 electric bass and a synthetic bass in an 80s 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. I put Casper’s song onto a disk and he played this on the stereo at kindergarten. I made him a copy to take home also.

The kindergarten purchased a new G5 computer. Casper was keen to have a look at it before it was even unpacked. In the office with Nadine, Casper looked at the picture of the computer on the box, pointing to each icon, and exclaimed: “Yes! It has iPhoto.⁵ Yes! It has iMovie. Yes! It has GarageBand!”

Casper had 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 assured Casper that the computer was intended for both the children and the teachers and that she would let him know when it was ready to use.

The second-to-last story Casper told as a part of my research was also while working with Nadine. It was another story about Mr Boing Boing. Casper began to tell his story and then clicked “stop” and exclaimed: “Instrument!” Nadine asked what he was doing and he told her that his story had to have an instrument sound in it. He chose drums and went through a variety of beats, selecting the drumbeat and adding 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 made. He took photos of each drawing, which were then added to his iMovie with the story and made into a QuickTime⁶ movie for Casper to take home. The last story is one that Casper typed himself, matching letters from story to

keyboard after Nadine had written it for him as he dictated it to her:

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.

Discussion

My overall research findings suggested that ICT enhanced the storytelling practices of the case-study children at my kindergarten. The desire to tell their stories and to communicate their ideas independently of text conventions led these children into a greater experimentation with, and exploration of, ICT. However, 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 ICT led to the complexity of the children’s stories. It appeared to me that it was probably a two-way relationship.

Greater experimentation with, and exploration of, ICT led to more complex understandings about the different purposes ICT could be used for. Stories increased in complexity when ICT was introduced. The length of the stories and the time and perseverance required to complete work also increased.

I believe that giving children the opportunity to create a multimodal representation of their story, using images, voice, and text, enables early childhood teachers to weave literacy practice into the lives of children in an authentic way. The children were interested in sharing their stories because they were of significance to them. Over the 4 years I have been involved in the recording of their stories I have noticed that when children have the opportunity to record and share their stories they see the purpose of print and begin to learn the functions of text. The recording of their stories has often led children to want to write their own stories—this case study, in which Casper wanted to take over the writing of his own stories, is an example. It is my belief that one way of encouraging children’s understandings of the purpose of text is to use a vehicle (such as ICT) or provide opportunities for children to share their stories so that they are exposed to literacy in authentic ways.

My research and work with children at Westmere Kindergarten has given me a clearer understanding of the relationship between new technology and literacy, and the potential value

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of ICT as a vehicle for supporting children's learning. I believe that this research can add to teachers' knowledge in early childhood and the primary sector about the power of children's storytelling and literacy development. Today we must view children's literacy through a multimodal lens, one that recognises less traditional forms of literacy. The use of computers and other forms of ICT, for instance, is a valuable new way of supporting children's literacy development.

It is evident that having the opportunity to digitally produce their stories over time has exposed children to literacy in meaningful contexts, in line with sociocultural approaches to literacy and learning. One of the sociocultural elements of literacy that Caroline Barratt-Pugh (2000) identified was: "Children learn about literacy as they engage in everyday practices in a range of social and cultural contexts within their families and communities" (p. 5). Underpinning the practice of early childhood teachers working in the New Zealand context is the sociocultural curriculum, *Te Whāriki* (Ministry of Education, 1996), which 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. (p. 9)

Literacy learning is a complex and multifaceted process, one that requires many approaches. According to Alan Luke and Peter Freebody, 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 interest in storytelling and their exposure to using ICT offer an opportunity to support their literacy learning in a sociocultural manner, by sharing events and interactions with people, places, and things.

At Westmere, children's storytelling has been influenced by Learning Stories, the assessment framework used by many New Zealand teachers. The narrative style of Learning Stories means that assessments are accessible to children and to their families/whānau. The storytelling nature of the Learning Stories and the opportunity they provide for children to

have their own voice heard through the use of the "child's voice", lead children to develop an interest in telling their own stories. The added component of ICT allows children a great deal of autonomy in telling, archiving, and listening to their stories.

Focusing on complexity, connections, and continuity has made it possible to see how using ICT with a purpose in mind can lead to deeper understandings around the use of ICT for children. Margaret Carr (2004) speaks of the importance of trying to "capture and protect the complexity of what children might be learning" (p. 1). One of the ways this is possible is to give children opportunities to publish their stories in a multimodal way. Because children in early childhood cannot write their stories, other ways of recording and documenting must be investigated.

Many different levels of complexity can be seen in children's storytelling. The number of themes within a story, and how many actors and actions are included in it, are all indicators that help to define the complexity within the stories that children tell. Casper illustrated one of his final stories (about Mr Long Bong Long Bong Bong) with a complex series of actions:

A long time ago Mr Long Bong Long Bong Bong was funning away for ten or six years. He played on the trampoline ... And then what happened is he saw a shopkeeper with a gun and it shot out fire bullets, and it was loads of guns and he said 'You are not allowed to shoot' and he ran away.

Casper also added some characterisation: "He [Mr Long Bong Long Bong Bong] was a little kid and liked doing lots of things that are silly." Complexity of modes (drawing, music, text, etc.) is also apparent in Casper's later stories.

Te Whāriki recognises the importance of making connections between the home and the early childhood 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, 2004, p. 21). These connections can be made through the stories children tell, as well as by revisiting their stories with parents/whānau. Casper's interest in making music and recording a song encouraged him to make connections with home and the wider community as he shared

his CD with his family and friends.

Storytelling is part of the culture of many early childhood settings and provides the opportunity for children to develop both continuity over time, between stories, and continuity of learning. Casper's stories have a continuity of theme; he mixes up his characters with his own identity, as in his story of the bear who was also named Casper. In a later story he begins: "There was a hot person what burnt their clothes. His name was Casper. Mr Long Blong Blong was his other name and he was so funny and stupid." The Casper/Long Blong Blong character has fun and is often silly; frequently, the story ends with a disaster.

Casper's stories remind me of the American kindergarten teacher Vivian Gussin Paley's (2004) discussion of children's stories and how they use them to make sense of fears, friendship, and fantasy. Casper is telling stories to help him make sense of his world. Wenger (1998) speaks of communities of practice "creating a dynamic form of continuity that preserves knowledge while keeping it current" (p. 252). 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 (2004) highlights continuity in the form of assessments. She says that "Documented stories connect with what went before, and construct a pathway of learning" (p. 28). Here Carr is speaking specifically about Learning Stories, but children's storytelling also becomes a part of the documentation process, enabling children, their families, and teachers to revisit children's past learning and make connections to enhance it.

Kress and Jewitt (2003) consider that a multimodal approach to learning requires the whole range of modes (visual, written texts, and audio) involved in representation and communication (p. 1). Early childhood teachers (as well as teachers in other sectors) need to be able to recognise these modes and not dismiss them as irrelevant just because they do not represent literacy as they know it. Digital storytelling is one way of embracing rather than shunning emerging modes of literacy.

Oral language is the foundation for all literacy. Telling stories is a cultural event—a way of learning about our culture and 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 storytelling. It is a way of making sense of their world; it also extends their world. 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).

In our early childhood setting the stories children have told (along with assessments of their learning) can be revisited in their portfolios, which are accessible at all times. These portfolios have become literary artefacts, and children often choose to "read" their portfolios in preference to a book. With this in mind, children need encouragement to tell their stories and know that their work is valued by, 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).

Vivian Gussin Paley 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. As Carr (2004, p. 28) 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."

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Notes

- 1 Kid Pix is a bitmap computer drawing program aimed at children.
- 2 A USB (Universal Serial Bus) is an interface between devices, originally designed for computers but now frequently found on video game consoles, cellphones, and even devices such as televisions and home stereo equipment.
- 3 GarageBand is an audio production tool for use with computers.
- 4 iMovie is a form of video editing software that allows users to edit their own home movies.
- 5 iPhoto can import, organise, edit, print, and share digital photos.
- 6 QuickTime is a multimedia technology capable of handling various formats of digital video, sound, text, animation, and music.

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