

“The Wind Goes Inside of Me”: Kindergarten Children’s Theories About Running Fast

By: Debbie Halls and Carol Anne Wien

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Deborah Halls is a kindergarten teacher with the Toronto District School Board. She completed her MEd in the Faculty of Education at York University and this article is developed from her major research project. As a practitioner, she has developed highly interesting ways of questioning children and allowing them to develop their theories about the world.

Children in a kindergarten class had difficulties with physical movement—bending awkwardly to tie shoes, going downstairs using two feet to a step, standing disengaged during exercise time. Debbie wondered whether she could design an emergent curriculum responsive to the movement potential of these children, promoting more fluent body awareness. She wanted to try supporting the project with Reggio-inspired pedagogy using documentation, changes to the environment, and adding many graphic materials. The entry point was an argument after recess about who could run fast. The children’s interest in how they run fast led to conversations about running, investigations of running outside, and theories of what permits fast running. Documentation and the illustration of theories through drawing and 3-dimensional figures led to deeper considerations by the children about how bodies work, and strong reflection by Debbie on the necessity of continual movement possibilities for young children in schools.

During a session of our Emergent Curriculum series with teachers in a Toronto area school district, we viewed the videotape “To Make a Portrait of a Lion” (Municipality of Reggio Emilia, 1987). Several teachers noticed how comfortable the Italian children were with their bodies as they explored every aspect of a stone lion in the piazza using physical movement. They were well coordinated

and agile as they climbed, ran, pulled themselves all over the lion, and made themselves at home in exploring an outdoor sculpture with every part of themselves.

Debbie compared these children to her own kindergarten class and how cautious they were, struggling to explore their world. One child could scarcely sit up at the beginning of the year, his stomach muscles so weak. Others made great efforts to bend over to tie their shoes, and waddled when they ran. Climbing stairs was a challenge: Tim (all children’s names are pseudonyms), for instance, took one step up and brought his other foot up beside it for each stair. Some children stood disengaged and unhappy during daily exercise time. Debbie wondered what kind of relationships the children had with their own bodies. Did they think at all about how they moved? Most of these students were from non-English linguistic and cultural backgrounds, with Punjabi or Urdu the main languages spoken. Some were still silent in March, using gestures to communicate. Many were cared for by elderly grandparents. They arrived and departed from school in strollers, lived in apartment buildings, and, by their own reports, didn’t spend much time outdoors.

Debbie was about to begin her master’s research project with Carol Anne, and we wondered whether these children had had sufficient opportunities to move their bodies in response to the world around them. We recognized that young

children’s principal route to development is through movement (Copple & Bredekamp, 2009), a fact of which some schools may be insufficiently aware. The brain/mind systems learn in relation to interaction with their environments, and low interaction—fewer relations—means less development (Greenspan & Shanker, 2004; Shore 1997). Debbie was worried about the children: “I saw them restricted in both their lack of easy use of their bodies and their inability to speak English.”

We consider ourselves students of the Reggio Emilia experience, inspired by Reggio educators’ holistic and democratic way of being with children and families (Edwards, Gandini, & Forman, 2012), so that we try to alter our own practices each in our own setting. Debbie teaches in Ontario’s public school system and Carol Anne teaches at York University. We value Reggio educators’ emphasis on participation, subjectivity, and difference (Rinaldi, 2001) and the sense Reggio educators convey that children have the right to their own sense of ownership of their learning. We also see a link between the belief that self-regulation by children, rather than intelligence, determines school success (e.g., Shanker, 2013) and children’s participation in ownership of their learning. We believe strong engagement probably contributes to strong self-regulation. Debbie had tried an emergent curriculum project earlier (Barnett & Halls, 2008). For her current project, she wanted to gain some insight into the idea of “the hundred languages of

children” (Malaguzzi, 1998) in terms of how children might express themselves; she also wanted to consider the use of “the environment as a third teacher” (Gandini, 1998) and try out documentation and its revisitation by children (Edwards, 1998; Malaguzzi, 1998).

“The hundred languages of learning” is a metaphor for the idea of all the various modes by means of which humans create symbols to communicate—whether it be through body movement as in dance, sports, or exercise, using the hands as in drawing, painting, or constructing with wire or blocks, using the imagination as in writing or telling stories, problem solving, or generating theories, using the throat to sing, chant, or speak, using the hands and mind to cook, sew, make pots with clay, and so forth. The notion is that the entire body, not merely the brain, is full of intelligence that creates symbols in multiple forms and places. Fraser (2006) notes that this understanding has been a major contribution of Reggio educators and recognizes the importance of multiple modes for learning for children learning English:

Teachers who understand that children communicate in a hundred different languages will ensure that the children in the class who do not speak the major language of communication will function successfully if they are able to use play and the materials in the classroom as a means of communication. (p. 39)

The Reggio phrase “the environment as a third teacher” is a concept that Carol Anne thinks many teachers have difficulty grasping because our traditional teaching processes are centred in controlling uses of time through scheduling. To speak of the environment (the indoor environment) as a teacher means, in her interpretation, that the context has been so carefully prepared, organized, and structured that it scaffolds children’s engagement, ongoing interest, and multiple interactions. It builds complexity of thinking by its very complex structure so that it is possible for

children to make multiple connections in multiple directions. Rather than learning focused on one relationship and one direction—as, for example, when a child works in a workbook in a traditional classroom—a rich environment offers multiple systems of relations so that multiple connections become the norm for children. For instance, in one of the Open Window Series images (Reggio Children, 1994), a child painting with a friend at the light table has these relations at least: her social relation with her friend, her relation with her own painting, her relation with her friend’s painting, her friend’s relation with her painting, her relation with the light coming through the painting, her friend’s relation with the light, which may be different from hers. This multidimensionality in the relational networks provided by the environment permits the construction of much richer, deeper connections in the mind than a simple unidirectional relation. Recently Carol Anne noted that the Reggio educators have a different notion of the word context than her own understanding. A common use of the term context means the background around something, such as an animal in its habitat. Reggio educators, in contrast, give a much more active role to context, more in line with its evolutionary meaning. This is a quote from a panel on literacy that is part of “The Wonder of Learning” exhibit: “Context is an interaction capable of restructuring knowledge.” Such a definition gives a much more active role (than mere background) to the material content surrounding children and suggests an active role for the environment. It is Carol Anne’s interpretation that this active notion of context is part of what is meant by the notion of the environment as a third teacher.

Pedagogical documentation (the term was first used by Dahlberg, Moss, and Pence, 1999) refers to the construction of material in the classroom that makes learning visible and allows those who view it to analyze, theorize, and interpret it. In this project, Debbie wanted to include opportunities for the children

both to revisit the documentation she constructed and to work with graphic materials in relation to the documentation. These were further steps along the path of her understanding, following her first attempt at emergent curriculum (Barnett & Halls, 2008). She knew that Malaguzzi had said that children “become even more curious, interested, and confident as they contemplate the meaning of what they have achieved” (Katz & Chard, 1996, p. 102). She was curious as to whether creating documentation for the purpose of revisiting would extend and deepen the children’s involvement with body awareness.

The Project Begins

How do teachers begin such projects? Debbie said: “Every day I carefully observed the children, following their lead, yet I seemed to be in a period of waiting for something to unfold. Nothing significant happened. Time was ticking away.” But then one morning, John bounded into class, out of breath, saying, “Mrs. Halls, we were racing outside and we won! Boys can run faster than girls!” His comment sparked a heated discussion about who is faster, with both sides adamant about their speed. Debbie noticed the wonderful provocation but did not want to emphasize the gender competition. We note that children around age five cannot bear to lose in a competition and will simply change the rules; at this age, they have to believe in their own power to succeed. Debbie wrote the question “What makes a person run fast?” on chart paper and posed the question to the children. They came up with responses like these:

You can run fast 'cause your shoes make you run.

Your head tells your legs to run fast.

If you think about your legs being as fast as wheels on a motorcycle then you can run fast.

My body makes me run fast.

Maybe it has to do with the blood running to your feet.

Debbie found the children's ideas far more advanced than she expected for kindergarten children, and she noticed that they were genuinely theorizing about many possibilities in making their bodies run fast. By this time it was spring, and she invited the children to go outside. She said: "I always marvel at how children react when exposed to the outdoors. It looks like an awakening of every part of their bodies. The school doors open and it becomes a natural instinct within them to run, and off they go."

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On this occasion the children ran and ran and ran. Debbie took photographs and videotape of each one running, exploring sprinting and jogging. She notes: "I realized how important it was to give the children more opportunities to be outside and have the freedom to run. I was getting to know the children in a different way." One of the most awkward children simply loved being outdoors, running with a smile on his face, giggling out loud, and not wanting to stop. The other children loved watching him run and laugh. Debbie wondered: "How could I create a way for him to experience moving inside our classroom in a way that would elicit the same joy and provide him with needed movement activities?"

Inside again, Tim, who loved to build in the block centre, began to build stairs and to climb up and down them. Debbie said:

Tim forced me to reflect on some of the unconscious decisions I make as a teacher. I knew I had to let go of some of my traditional teaching practices that confined Tim's need to move. I decided I would try to stop myself from saying 'no' unless I saw someone's safety was at risk. Would it be okay if he climbed on structures he built? Biting my tongue, I watched. When he began building steps with the blocks, climbing up and jumping off, he would look over at me waiting for me to stop him. When I reassured him he could continue, he built steps on a daily basis. His interest in building steps intrigued me, because he was unsure on our school stairs. Was building stairs with blocks his way of mastering stairs?

Children Running

Debbie showed the children images of themselves running, both still images and video on the TV monitor. They all wanted to see themselves, noting differences in individual movements as they ran.



Look how high my legs are.

One of my arms is back and the other one is in front of me.

I'm flying in the air!

Debbie suggested that the children choose an image and draw themselves running, using white paper and pencils to enable fine detail. To support their efforts, she

added two movable mannequins to the drawing table so the children could put a mannequin in their own poses as an aid to drawing. Some children enjoyed posing the mannequin and referred to it, and some used their own images. Debbie found it intriguing that some children who normally drew stick figures were able to capture a clearer representation by using their photograph.



Figure 2: Attempt to represent movement

Around this time, one child arrived at school with a broken arm in a plaster cast, sparking much discussion. Ava's misfortune led to increased interest in bodies and bones and investigation of books on the body. Because of the interest in casts, Debbie invited Vanessa Barnett, an instructional leader in visual arts, to work with the children to create three-dimensional figures in running poses. The drawings would work as plans for these figures. First the children made an armature with pipe cleaners, then covered it with masking tape (this part the children needed adult help with). Debbie purchased OrthoTape plaster bandages to coat the figures:

The day the children began working with the plaster of Paris bandages was one of those moments in teaching when learning emanates. The children were so excited to see how their

rather delicate pipe cleaner figures were transformed—first wet, then drying into a solid with strength and weight. The hand of an artist, guiding, over the hand of a child winding, was enchanting to see. They loved working with the plaster material. The sculptures hardened quickly and the children compared the hardness with Ava's cast.

After the children had tried drawing an image of themselves running from a still photograph or video image, Debbie invited them to show their theory about how we run fast on the drawing. She wanted to control the palette to make the theories show up well and thought she would ask the children to draw their theory in red pencil. This invitation made the children think intentionally about their theory and how to represent it on their drawing. We share examples of five of the children's theories to convey their approach to this invitation, and the clarity of the presentation with the controlled palette of figure pencil drawing and theory in red.



Figure 3. Tim: *The wind goes inside me.*

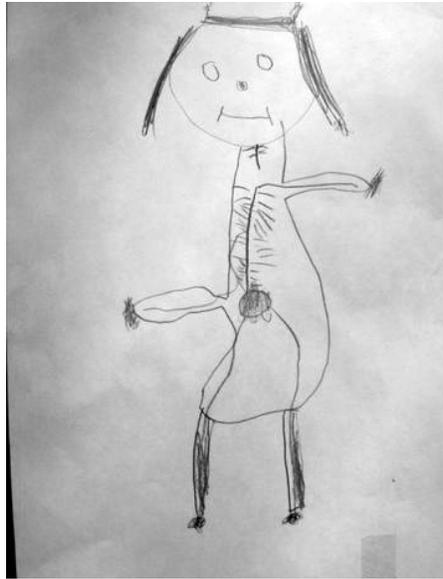


Figure 4. Hailey: *I think it's about the blood running through your body. Your blood goes all over the place.*



Figure 5. Maria: *Your bones are moving when you run.*

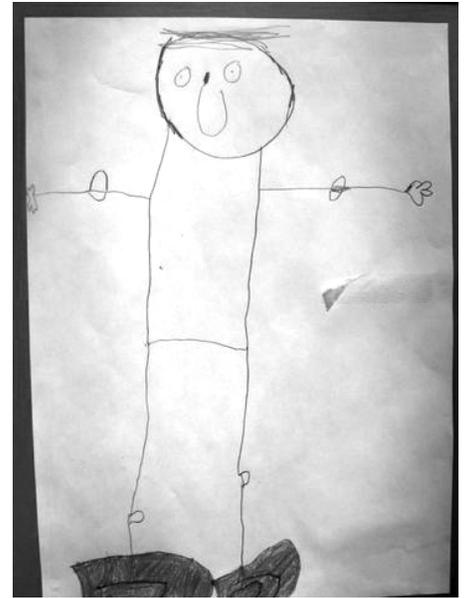


Figure 6. John: *I think your shoes make you run fast. My cousin got new shoes, pink and white, and she's fast.*



Figure 7. Simran: *Your head tells your legs to run fast.*

Debbie introduced many other activities connected to movement and body awareness throughout this period, from yoga poses in the gym, to daily exercise with a Grade 3 class whose members guided the kindergarten children through the movements in pairs. A mother with a baby visited and sparked much discussion

about development and movement. About two months into the project, in late May, the children visited a water park, playing freely in its fountains, spouts, and puddles. Debbie writes:

This encounter with the water park was a revelation for me. The children seemed free to be themselves. They were running, jumping, shouting, and skipping, gleeful. It reminded me of watching the videotape on making a portrait of the lion (Municipality of Reggio Emilia, 1987) in which the Reggio children were so fluid and effortless in their movement. Watching my own children caused me to wonder. Was I restricting them from being natural and fluid by following the structure and prescribed rules of a school system? Was this ease in motion buried within the children, dampened down by school, and by changing the context they were able to display more natural movement? Or was this new fluidity developed over our experience in the past two months?

In June, Debbie and the children tested out their theories about what makes us run fast, returning to their favourite grassy area where they had been running on many occasions during the spring. Debbie asked the children, “Have you thought about how you could test out your theories of what makes a person run fast?” As so often happens in scientific research, children found a way to test—and find evidence to confirm—their own theory. Hailey returned to Debbie, ecstatic after running hard, saying, “Mrs. Halls, feel my chest. My heart is beating fast! My blood is racing through my body!” Simran had theorized that it is our brain that makes us run fast, and tried different running speeds, saying afterwards, “When I think about running slow, I slow down. When I think to run fast, I run fast. My brain makes my body work the way I tell it to.” (Carol Anne can’t help but notice the marvellous self-regulation this child has developed [Shanker, 2013], controlling her body to her own directions and intentions).

Creating Documentation

Debbie wanted to create documentation that would attract the children and reveal their theories in a way that was easy for the children to understand. She wanted to investigate what happens when children are invited to revisit experience and reflect on it. She also wanted them to be aware of other children’s theories and to offer their own interpretations. The instructional leader, Vanessa Barnett, helped her plan a striking documentation presentation with the drawings of theories mounted on red paper to highlight the red theories, a black and white image of each child running alongside the drawing, and text below encapsulating each child’s theory.



Figure 8: Studying documentation

When the documentation was placed in the meeting area, the children were drawn to it and spent a long time looking it over. There was little comment at first, and Debbie felt it important not to break their silence with questions. She waited. Six children were examining the documentation at one point and began to talk, point to various theories, and ask questions.

What is Maria’s theory?

I think your bones help you to run fast.

But Ava can still run with a broken arm.

I think the bones in your legs are really important, not the ones in your arms.

The bones have muscles and the food helps them to get stronger.

You know the food helps the bones and heart get stronger.

Look, Simran says her brain is telling her to run fast.

Food gives energy to your brain, you know.

But the brain is at the top, and your legs are at the bottom. How can it tell them?

You think about it and your legs do it.

You have to like to run.

No, if you have to run, you will run, even if you don’t like it.

If you’re not happy about running, then you won’t do it well, so you won’t go as fast.

I think shoes make you run fast.

I think it’s everything! Shoes can’t run by themselves.

Yes, but your feet can make your shoes run. My legs and feet have bones and the blood goes up to my heart and runs down again and then I can run faster.

We can see how the documentation held the theories stable so the children could consider their logic and debate them. And we can see how the children shifted their thinking—instead of attributing a single cause to the feat of running fast, such as each child initially generated, while revisiting the documentation they moved to thinking about multiple causes, as in, “I think it’s everything,” or John’s qualification to his theory that shoes make us run fast, in which he begins to absorb some of the other children’s theories and consider them as well. Revisiting the experiences and theories through documentation allowed the children to

reflect on, clarify, and elaborate both their own and others' thoughts and theories about running. New levels of understanding emerged in studying the documentation together. This revisiting through the documentation also led some children to test out more theories and, in fact, to alter their theories to include other aspects. For example, Maria, who began with a theory that bones make us run fast, said to Debbie the day after studying the documentation:

Mrs. Halls, I've been thinking a lot about running after looking at the theories. So, I tried running fast again, and I could feel pounding all through my body. I definitely know that it was the blood rushing everywhere. It has to do with the blood for sure.

Months later, when this child was in grade one, she returned one day with a note for Debbie, listing items to help you run fast:

- You can run
1. eating healthy
 2. exercise
 3. vitamins
 4. practice
 5. running shoes

Debbie said: "I was surprised and elated that the project we worked on together still resonated with Maria months later."

Reflections

Debbie had wanted to investigate three areas of Reggio-inspired practice when she began this project—"the hundred languages" of learning, the potential of the environment as a third teacher, and documentation. In drawing themselves in a running pose and working from observation of an image, the children were both reconnecting with their actions of running and connecting what they could see in their photographs to what they could represent on paper with pencil. There is a relation to their past experience of running, a new relation of seeing their running in an image right in front of them, and their relations with the materials

used in trying to reproduce that image/experience in drawing. These relations run in multiple directions, strengthening the possibilities for networks of thinking and memory. Adding their theory in red pencil later meant that their theory was expressed in drawing in addition to being expressed in speech. Seeing their theory in drawing, their still image, and their theory written down as text in the documentation gave them more sets of relations to explore, and their thoughts became more differentiated and sophisticated.

"We can see how the documentation held the theories stable so the children could consider their logic and debate them."

In working with her environment, Debbie used the outdoors as a regular part of activities throughout that spring and added centres and materials in response to children's interests indoors. For instance, she made a dance centre to engage a child who walked away in disinterest from the running experiences; she discovered that the child loved to dance and led the other children in the new movement centre with music. Changing the rules in the block centre helped Tim take risks in mastering stairs in his own way, at his own pace. He changed, during this project, from a quiet, unresponsive child to a vibrant, happy child.

It is always difficult for teachers to document sufficiently when their classrooms are only partly set up to sustain children's interactions in an emergent curriculum. Carol Anne argues that many kindergarten classrooms do not have adequate materials, or design and organization of those materials, to keep children engaged for long periods of time. It is not the children's fault if they are not interested; it is a lack in the context. When environments are sufficiently structured with complex and intriguing materials, the children can hardly wait to be active,

and teachers then have time to document seriously as the children work. Many teachers who attempt documentation struggle with getting documentation on the walls during the activity itself. In this case, we admit that the panels we discussed earlier were created at the end of the project itself. Even so, we can see that the children's intent engagement with them and further conversation pushed their thoughts to levels they had not reached, and we were certainly pleased by the sophistication of their thinking and expression.

Did this emergent curriculum on movement change Debbie as a teacher? She said:

As an educator, I had a tendency to impose structure and unnecessary rules on the children, curbing their natural movement in the classroom. Further, I conformed to the norms of conventional teaching embedded in me instead of questioning their validity. When I became sensitive to the fact that many children in our community are living in small dwellings, without street-level play, and are cared for by the elderly, I realized they have too few opportunities to experience physical movement. As a teacher, I realized part of my role is to be a "dispenser of occasions" (Edwards, 1998, p. 181), and by observing and listening to the children I was able to offer many more movement experiences.

Carol Anne thinks that Debbie is unusual as a teacher in that she was able to put the children first, rather than the patterns of school routines. Getting past the expectation of quiet classrooms, still children, and highly controlled movement patterns in schools is not easy. Yet children from birth to age 7 or 8 learn primarily through their interactions with the environment, and these cannot happen without the movement of their bodies in relation to that environment (Coppole & Bredekamp, 2009). Lack of understanding of children's right to move in order to develop when in early childhood may be

the single largest obstruction to adequate development in schools. Debbie's work in this project is, to Carol Anne, innovative and radical because she put the children's development of physicality first, before literacy and numeracy. Carol Anne believes that Debbie is on the right track, that literacy and numeracy cannot have strong foundations if not built on a base of strong physical development, of joy and confidence in movement. Yet, in addition, Debbie did many other things: she invited children to generate working theories, that is, to think; she used accessible, inexpensive materials; she demonstrated how to use drawing to illustrate working theories; she offered 3-dimensional work; she showed how documentation propels children to develop their theories further; and she offered many ideas and experiences for inviting more movement possibilities into kindergarten classrooms. Her focus was movement, but these other aspects were folded in around it. Debbie concludes:

Movement and body awareness provided the children with an opening for expression, creativity, and discovery. Their joy of movement became a way they expressed themselves, their bodies

released from confining rules. They began to trust in their bodies, and their movements proved to be spontaneous, fluid, and effortless. To witness the children's joy and sophistication as I responded to their movements and interests was truly remarkable.

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