The Gift of Fiction

Using Technology to Support Empathy

by Alex Cruickshank, Sam Hall, and Ellen Hall

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"Fiction gives us empathy: it puts us inside the minds of other people, gives us the gifts of seeing the world through their eyes."

Neil Gaiman, American Author
(2013, p. xvi)

Neil Gaiman, who writes across genres and audiences in a way that few authors are able to, and who crafts books as rich in literary device for four- and five-year olds as for adults, recognizes the power of empathy in storytelling. This empathy is developed within the readers who have access to new characters and places, but also within the authors themselves, who must take on the viewpoints of both their characters and the audience for whom they write. Storytelling has been a device for connection from the beginning of humankind (Zipes, 2012). Often, when engaging in investigations around storytelling with young children, we think about plot and story arc. "What happens next?" is a common question that educators ask. Conventions around voice and audience are typically introduced later, sometimes not until authors are in adolescence or beyond. Empathy, however, is recognized as a crucial aspect of human development (Siegel, 2012).

In this modern era, when we are witnessing the rise of technological tools — tools that have as much potential to divide us as they do to connect us — we have a responsibility to look for opportunities to uncover the tangible connections in non-human technologies. We are honored to share a tale about a little robot who pushed our thinking about the relationships between storytelling, empathy, and the role technology has to play in cultivating these very human skills.

When the prekindergarten children of Room 12 asked to adopt a classroom pet, Jenny, one of their teachers, was excited. She is an animal lover and has a history of loving relationships with classroom hamsters. However, this go-round of adopting a pet was to hold a different kind of experience, a high-tech experience.

Sphero, a Boulder-based robotics company, makes spherical robots that, through the use of colored lights and subtle movements, convey emotions as clearly as many animals. They were the engineers behind the beloved pop-culture figure BB-8, from the recent movie, *Star Wars: The Force Awakens*, and had released a mini BB-8 that can be controlled via any handheld device. These personal BB-8 robots convey as

much personality as the droid in the movie. A colleague gifted a mini BB-8 to our school.

To offer some context: Boulder Journey School welcomes over 200 children, ranging in age from eight weeks to six years, and their families. Our curriculum is emergent, inspired by the schools for young children in Reggio Emilia, Italy, and the work of Frances and David Hawkins. Investigations begin with questions, and through observations of children and reflections on the documentation of experiences, the curriculum evolves. A team of administrative faculty support classroom work. It was in one of the administrative offices that BB-8 waited, patiently, to be adopted.

The office, while mainly utilized by adults, is open to children, as are all of the spaces within our school. The children sometimes come by to visit and say hello, as well as to work in small groups. Three children from Room 12 were visiting one morning when they spied BB-8.

Many of the children in Room 12 are *Star Wars* lovers. It is common to hear children humming the *Star Wars* theme as you walk by their classroom, or to hear shouts of "I am Darth Vader." The children were immediately drawn to the robot. They played with BB-8, and when it was time to say goodbye, each one offered a kiss and 'tucked' BB-8 into the robot bed. Based on our observations of the children, we asked, "How might the children react if this little robot were invited to move into their classroom as their new pet?"

"Until the special culture of science becomes more deeply embedded in our general culture... we will, as a society, remain in a state of alienation from the very substrate of our lives."

David Hawkins (2000, p. 119)

Skip ahead about six months: BB-8 had become an integral member of the class. Some of the children were working on building a home for the robot, while others were exploring ways to engage. The conversation turned to BB-8 meeting other classes. Room 12 was receiving invitations to bring BB-8 to play, and the children were wondering whether BB-8 would like to know more about the school beyond the adoptive classroom. While the children spend time working throughout the school, BB-8 had primarily been sequestered in Room 12.

Inspired by Hawkins' essay, cited above, we recognize our responsibility, as early childhood educators, to find avenues to embed the "special culture of science" into our everyday lives. This culture of science includes both the examination of the various disciplines, of which technology is one, and the cultivation of curiosity about the world around us and our role in this world. For the children of Room 12, introducing their work with robotics to other children in the school included both avenues.

Further, we have a responsibility to ask children to consider the ethics of using robotics to form a mutual language with other children. How can the particular novelty of this high technology offer a connection within the community, rather than an alienation? Robotics, in general, and BB-8, specifically, are new to our society at large, and certainly to our school. The novelty of BB-8 and the tablet used to control his actions brought with them joy and delight, to be sure, but also apprehension on the part of the teachers. And these three emotional ingredients offered a potential recipe for an energy that bordered on 'wild.' With this in mind, would it be fair for BB-8 to simply roll into a new classroom unannounced? Would joyful yet wild energy be welcome? How could Room 12 strike a balance between sharing BB-8 and respecting the experiences taking place beyond their classroom walls?

We brought these questions to the children and realized that, in order to respect different classroom experiences,

Photograph by the authors • Ashlyn and Hannah get to know BB-8.

the children would have to introduce BB-8 to the other classes in a way that children of different ages would appreciate. After some discussion, it was decided that BB-8 could be introduced through video stories — each story tailored to a different age group. For this to happen, the children needed to engage in research to uncover each age group's interests. Jenny invited a small group of children to study the infants.

The children brought cameras and entered the rooms quietly. They carefully examined the environments, remarking on the materials they encountered.

Following their experience documenting the infant rooms, the children gathered to examine their photographs and discuss their findings. Together they developed a list of noteworthy items and actions. The children determined that if they observed an item in both classrooms, it must be something infants like, and thus would be a feature to include in the video story for the infants.

Items	Actions
■ **Balls** ■ **Things that hang** ■ **Colors (changing colors) Light** ■ Spring/coils ■ **Mirrors** ■ Water ■ Sound (horn) ■ Animals ■ Stuffies (soft) ■ **Tubes (different sizes)** ■ **Music** ■ Bubbles ■ **Flowers and plants** ■ Ramps ■ Squishy stuff ■ Circles/things that are round	■ Sleeping ■ Bouncing ■ Touching ■ Rocking ■ Laughing ■ Shaking ■ Watching ■ Sliding ■ Holding ■ Chewing ■ Crawling ■ Eating

Jenny's notes from the children's reflections on their visit to the infant room. The notes in bold are items that the children observed in both infant classrooms.

The children were analyzing their data and drawing conclusions. They were also thinking about the role of technology in their world. Beyond that, they were developing their sense of empathy. Roman Krznaric, founder of the online Empathy Museum (empathymuseum.com), noted, "Empathy is the art of stepping imaginatively into the shoes of another person, understanding their feelings and perspectives, and using that understanding to guide your actions" (The Radical Power of Empathy: The Revolution of Human Relationships section, paragraph 4). The children of Room 12 were developing strategies to see through the eyes of the infants and using that insight to guide their work.

They wanted to create a dreamscape for BB-8 to play in, one that would utilize the languages of the infants — the languages of mirrors, lights, balls, tubes, and colors — to tell the robot's story. Rob Maigret, Chief Creative Officer at Sphero, noted, "I believe that technology isn't just a tool for utility, it's a tool for great story" (as cited in Weinberger, 2015, paragraph 18). Here was BB-8, a being without sentience, offering tools for stories — stories that focused on the cultivation of setting and voice over the utilization of plot.

This process was repeated as the children researched other age groups. It had to be; there are differences in each age group, and the children noticed them. Thomas noted that for preschool-age children there were LEGOs® in each classroom but, "I didn't see a single LEGO® in the infant classrooms!" In each video story, the plot remained the same: BB-8 encountered a new environment, but the setting and tone changed to mirror the differences in the age groups. It is a skill to recognize the necessity of changing an author's voice to match the audience.

The gift of the children's fiction was, as Gaiman states in the opening quote, to offer a way to see through the eyes of another. In this experience, the older children used empathy, seeing the world through the eyes of the younger children, to create age-appropriate stories that would introduce BB-8.

BB-8 has been a gift as well — a gift to us as a school to act as a vehicle to support the children's friendship with technology in this fast-changing world. As 21st century educators, we must engage children with technology as a tool — something to be tinkered with, messed about with, and engaged with as a language. As today's children grow into this future that we cannot imagine, we must find ways for them to build relationships and explore avenues in which technology can further the children's investigations, rather than become the investigations. In considering technology in these ways, we hope to offer children a future in which they will not be dominated by, but rather live in symbiosis, with technology.

To view a sample of the videos the children directed, visit this link: http://boulderjourneyschool.com/robot

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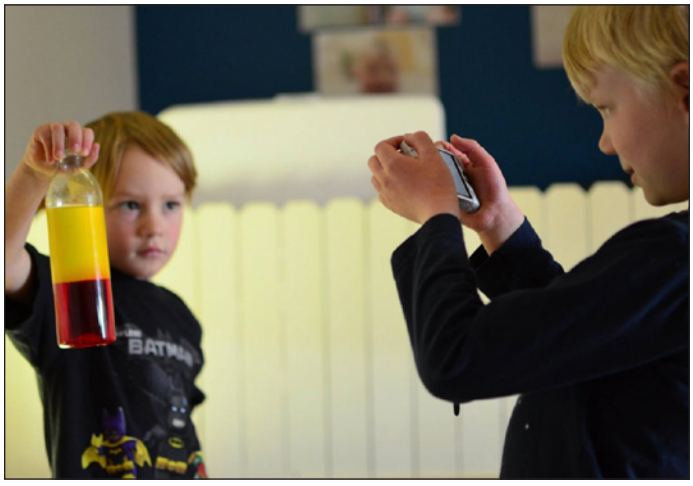

Photograph by the authors • Summit holds a material so Thomas can document it."It's little so they could lift it. We could show the different sizes," Summit reflects.

sphero-builds-star-wars-bb-8-for-disney-and-lucasfilm-2015-4

Zipes, J. (2012). *The irresistible fairy tale: The cultural and social history of a genre*. Princeton, NJ: Princeton University Press.

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Photograph by the authors • Summit, Emerson, and Tyler set the stage for BB-8's dreamscape of mirrors, lights, balls, tubes, colors.