



# Supporting Young Learners Through a Multimodal Digital Storytelling Activity

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**ABSTRACT:** This paper presents the results of a small-scale qualitative case study that explored a tutor's role in supporting young learners through a digital storytelling (DS) activity through Microsoft PowerPoint. The two children who participated in this study were in grade one and attended private schools in Canada. Participatory observations, field notes, interviews, the children's narratives, and observational narratives were the primary sources of data. The children carried out a DS activity during three separate sessions for each child that involved planning the story, enacting the story, creating and editing a storyboard with cameras and computers, and lastly, celebrating the stories they produced with their family members. We found that the tutor played an important role in making the activity purposeful, authentic, and passion-led (Anderson, 2016). We also found that the tutor helped the children represent and understand meaning through an integration of modes, supported their use of technology, engaged their interest throughout the activity, and encouraged self-reflection on their narrative writing skills. Our findings point to the need for future research on how digital storytelling activities can be carried out in mainstream classroom settings, where teachers can schedule one-on-one conference sessions to support children as they become multimodal composers.

**Keywords:** digital storytelling, multimodal, multiliteracies, writing

## Introduction

Learning to write can be challenging for beginning writers who may know exactly what they want to write about, but may not be able to develop or retain their ideas because of motor challenges or because they struggle to conform to writing conventions (McCutchen, 2006; Peterson, 2014). These writing challenges can be frustrating, and may lead to a lack of motivation and engagement in learning. One way to alleviate learners' frustrations is by leveraging the affordances of digital technologies. Children today are increasingly surrounded by technologies in their homes, schools, and communities. Integrating technology into literacy activities can help teachers draw on students' interests and abilities, and help them learn the new skills that they need to adapt to today's digital world (Labbo & Place, 2010; Wilhelm, 2012). It can also motivate children to learn traditional skills-based practices.

Technology has created new modes of writing that transcend traditional views of literacy, such as combining conventions of print with music, animation, videos, film, and gestures. An example of an activity, which can, but not always, incorporate writing with digital technologies, is digital storytelling (DS), that is, "the art of telling stories with multimedia objects including images, audio, and video" (Rossiter & Garcia, 2010, p. 37). DS has the potential to capture young learners' interests and enhance their literacy engagement and motivation because it affords multiple modes of meaning making (Bran, 2010; Kress, 2009). Studies have shown that when learners are in control of the production process during DS activities, they feel empowered and enabled to represent their experiences and knowledge (Macleroy, 2016a). However, learning how to navigate the complex process of composing multimodally requires support and guidance from teachers, especially for young learners (Macleroy, 2016a; Neville, 2010). This small-scale study focuses on the role of a tutor in facilitating and collaborating with young learners on a DS activity. We asked the following research question: What is the tutor's role in supporting the two focus children's DS experiences? Our study contributes to the current research by suggesting how teachers can collaborate with their young learners on DS activities.

## Conceptual framework

Studies on DS in the classroom have provided evidence of its role in increasing learners' engagement in the composing process, enhancing learners' awareness of their oral skills, building vocabulary, facilitating language learning, stimulating creativity, criticality and agency, and creating better connections between the school, home and community (e.g., Bran, 2010; Castañeda, 2013; Chung, 2016; Macleroy, 2016a; 2016b; Tajeri, Syal & Marzban, 2017). According to Anderson (2016), there are two key principles to an effective DS activity.

Firstly, it should be purposeful and feel authentic to learners (Anderson, 2016). Secondly, it should be passion-led in that it “enlists the outside passions of both students and teachers, enhancing engagement by encouraging students to choose areas of interest which matter to them” (Anderson, 2016, p. 204).

DS takes the art of oral storytelling -- a highly valued literacy practice that enhances oral language, early literacy skills, creativity, and cultural awareness (Rainville & Gordh, 2016) - - and uses a palette of digital tools to weave together learners’ stories using various modes (Kress, 2009; Porter, 2005). While some learners may use oral storytelling (e.g., through voice animation) in their digital stories, other learners may combine conventional print with other modes to develop both traditional and new literacy skills. Lankshear, Snyder and Green (2000) argue that using new technologies to fit in with traditional literacy practices without considering how the activity meets learners’ interests, be relevant to them, and give them a sense of purpose is merely giving the activity a “digital makeover” (p. 102). An example of this is when children are required to type stories on computers rather than write stories by hand. Similarly, Neville (2010) writes that pedagogical practices which simply add a multimodal element to existing approaches without teaching new skills do not constitute effective or authentic literacy practices. Instead, Romrell, Kidder and Wood (2014) suggest that technology should be used to modify or redesign the activity, and to create tasks that cannot be done without technology.

A pedagogy based on the principle of redesigning traditional literacy activities is multiliteracies. Multiliteracies was introduced by the New London Group (1996) as a pedagogy that changes the “‘what’ of literacy pedagogy” (p. 65) to include new design elements or modes for meaning making: linguistic, visual, audio, gestural, spatial, multimodal. The multiliteracies theory posits that learners are “active designers of meaning” (New London Group, 1996, p. 65) who can draw on the modes available to them to engage in a Designing process that produces a transformed or Redesigned text. This concept of Designing reinforces the idea that meaning is not produced through a single mode or semiotic system, but rather through the combination and integration of modes and systems (Exley, 2008). According to Burke and Hardware (2015), the multiliteracies pedagogy does not intend to discredit conventional literacy forms. Rather, it aims to provide opportunities for learners to express their knowledge through a variety of modalities, thereby making allowance for modes other than just writing.

Neville (2010) suggests that teachers should take on the role of facilitators by supporting students as they learn the strategies for working with the features, forms, and contexts of digital texts. Plowman and Stephen (2007) have showcased in their research the effectiveness of guided interaction, which involves both direct (proximal) and indirect (distal) teaching and learning, on creating opportunities for learning with information and

communications technology (ICT) for preschool children in play contexts. This study focuses on the role of a tutor in providing guided interactions to young learners on a DS activity. In the context of home tutoring sessions, we explore how learners draw on multimodality throughout the entire process of the DS activity, and we highlight the tutor's involvement in engaging learners and enriching their multimodal literacy learning experiences.

## Methods

### Research design

This study adheres to case study research. Case studies explore a bounded system (Merriam, 1988). For this study, the bounded system is the tutor (author one), particularly her role in supporting children during a DS activity. The purpose of the study is described as *instrumental*, where we, as researchers, were looking to gain insight into supporting beginner or struggling writers through a DS activity.

### Participants

Convenience sampling was employed to recruit participants for this study. Prior to commencing the study, the study was submitted to the University of Toronto's research ethics review process. Then the parent(s) of two children (six-year-olds) in grade one, whom author one had been tutoring at the time of the study, provided informed consent for their child's participation in this study. These children are both males – Zachary and Rey Mysterio (pseudonyms selected by participants) – and both reside in Ontario, Canada. Zachary's scheduled tutor sessions were once a week and Rey's sessions were twice a week – each an hour in length. These sessions had been taking place for approximately one year before the study began, which had afforded author one the opportunity to build strong relationships with the children and their families as well as to get familiar with the children. We believe author one's familiarity with the participants and their families strengthen our research.

### Data collection

Author one employed participant observation (Cohen, Manion & Morrison, 2011) during three separate one-hour DS sessions for each child in their respective homes. These sessions occurred between author one and each child, and were organized for the purpose of this study. During each visit, author one took general field notes during each visit, while more extensive observational narratives were written after each session. Observer commentary (Merriam, 1998) was also included in the notes, particularly regarding author one's own role in supporting the children as they composed digital stories. Author one also collected the children's communicative artefacts produced during these sessions. Furthermore, each child

was briefly interviewed by author one after the final visit to each child's home, where she used what Cohen et al. (2011) call the "interview guide approach" (p. 413). This approach is designed to capture conversational dialogue with participants that is loosely structured, yet relevant to the purposes set out for the investigation. Children were asked questions such as: Did you like these activities we have been doing to create stories? What did you like about them? Do you think the activity helped you create your story? How? What would you want to add or change about these activities to help you create more/different stories? The conversations we had with the children informed our analysis and provided context for the observational narratives presented in our findings.

### ***Digital storytelling activity***

Barone, Mallette and Xu (2005) and Peterson (2008) explain that in order for children to develop as writers and producers of text, it is important for them to feel that their writing belongs to them, that they have control over what they write, and that they can make decisions on what they think is best to include in their writing. In line with this suggestion, the DS activity designed for this study was open-ended as children could select a topic that was interesting to them, what story elements they wanted to include, and how they wanted their story to unfold. At the start of the project, children were told that their stories would be presented to members of their family, which not only showed that they were valued as writers but aimed to give them a sense of purpose throughout the DS activity.

DS is commonly described in four sequential stages: pre-production; production; post-production and distribution (e.g., Chung, 2006; Gere, 2002). The first stage involves five prescribed steps: (1) posing questions in authentic scenarios, (2) eliciting exploration of topical information, (3) writing the script and eliciting peer review, (4) performing oral storytelling, and (5) designing a story map and storyboard (Yang & Wu, 2012). The second stage involves integrating new technology to piece together still images that represent story events, and recording students' voices as they tell the tale. The third stage involves fine-tuning students' digital stories through multimedia editing. The final stage is said to be a celebration of students' narratives. For the context of this study, we used these stages as a guide, rather than as prescribed steps.

### ***Pre-production***

First, we offered the children several traditional paper-based storybooks that were either unfamiliar to the children because they were new, such as a series of Power Ranger books, or familiar to the children because both children owned these books at home, such as a series of Robert Munsch books. Previous observations of the children revealed that the children were interested in superheroes as well Robert Munsch books, so in offering these specific books to the children, our aim was to engage the children by appealing to their interests. The

children selected one or two books they found most appealing and spent time reading and getting to know the texts. Rey chose the Power Rangers books and Zackary chose a few Robert Munsch books.

The children were then asked: What things did you notice that were the same and different in each story? How do you think the author decided what to write about? What things do you think the author did when writing this story? These questions prompted discussion about what they noticed across the texts and the process by which one may have composed these texts. In particular, we identified the following story elements across texts: introduction, characters, setting, plot/conflict, story events, resolution, and dialogue.

After our discussion, the children were shown an example of a digital narrative. Drawing upon our discussion about what story elements we noticed across texts, Rey and Zachary were asked to think about where they wanted their story to take place and what characters they wanted to include. The children were offered colouring books to help them decide on the characters for their story, explaining that they were welcome to choose characters from the colouring book or draw their own characters in a sketchbook. The children first selected their characters, which helped them piece together other aspects of their story. The children then finished mapping out their stories independently. In so doing, they simultaneously used various modes to make meaning. For instance, the children dramatized their story events using touch, gaze, materials, and talk. Each narrative Rey and Zackary dramatized reflected the type of stories they selected from the storybooks provided during the initial phase of the DS activity.

### ***Production, post-production, and distribution***

We then helped the children take pictures of their stories as they moved their characters across their storyboards and pieced together their story events. The children were assisted in importing these pictures onto a computer. Microsoft PowerPoint was used to link these still images together. Upon viewing their story through PowerPoint, the children themselves noticed that their stories were missing text. With the tutor's assistance, the children used the keyboard to insert text boxes in their stories. The children then either inserted the text themselves or requested the tutor to be their scribe. Throughout the entire process, the children were offered one-on-one conferencing to support their narrative writing process. Revisions were considered an ongoing process and upon completion of the stories, we celebrated by sharing their stories with their families.

## Analysis

Our analysis took place in three stages. In the first stage, we read through the field notes, looked at the artefacts of the children's narratives, and listened to the interviews to independently identify salient themes in the data that were relevant to the research question. Specifically, we identified all aspects of the data that described the tutor's involvement in the children's DS process (e.g., the tutor providing storybooks, the tutor offering to be a scribe). In the second stage of the analysis, we worked together to consolidate our respective themes. We did this by merging similar subthemes to develop core themes (e.g., the tutor's role in helping children to select modes to represent meaning, the tutor's role in maintaining children's desire to craft narratives). Upon finalizing the core themes and subthemes, we revisited the data to check that all the themes were accurately associated with the data, and to select examples from the data that would illustrate each theme. In the third stage of the analysis, we selected sections of the observational narratives to include in this report that were most salient to each subtheme. In so doing, we aimed to provide "thick descriptions" (Geertz, 1949) of our findings. Since our research question focuses on the role of the tutor during the DS activity, we believe that the observational narratives written from the perspective of the researcher who conducted the DS activity would not only contextualize the findings, but also provide readers with a first-hand look into the tutor's role throughout the activity.

## Trustworthiness and limitations

Trustworthiness is often linked to the *truth* of one's research. Terms often used to measure this truth are validity, replicability, and reliability. Our research study falls within the interpretive paradigm, thus we do not claim to provide an objective truth, meaning our results do not reflect an absolute truth of lived experiences. Rather, we offer an interpretation of lived experience during a DS activity. Like many other qualitative researchers (e.g., Bold, 2012), we established trustworthiness by reconceptualizing the above terms, which have a strong legacy in measuring quality research. Bold (2012), for instance, argues:

. . . validity lies in the relevance of the lives explored, and their replicability is in . . . the comparisons that readers make with the lived stories that they know. The stories have already been replicated a thousand times over in a range of contexts and experiences within the readers' minds. Thus, they are reliable -- telling stories that are common in many ways to others. (p.145)

One limitation of our study linked to the element of trustworthiness is that author one only collected data during three DS sessions for each separate child, totalling six one-hour observational visits. A limited amount of time in the field is said to compromise the

trustworthiness of one's research. To address this, we triangulated data sources and conducted member checks with the children by talking to them about the emergent themes and obtaining their perspectives. Triangulating data sources and member checking helped us to provide “thick descriptions” of the events that took place during the DS activity. Although member checks are traditionally used to address the ethical limitation of misrepresentation, its main role for this study was to provide an avenue to co-construct participants' experiences during the DS activity. When member-checking to confirm accuracy of information, the underlying assumption is that there is a fixed truth to compare it to, but this fixed truth or reality is often rejected within an interpretive epistemological framework.

Another limitation of this study is that it took place in the context of one-on-one tutoring sessions, and we did not have access to the children's classrooms. Thus, it can be said that the results of our study cannot be easily generalized to the classroom context. However, since both authors have taught in mainstream classrooms, we were able to interpret and discuss the significance of our findings from the perspective of classroom teachers. We hope that the detailed accounts we provide in the form of observational narratives will help readers relate our findings to other situations and contexts.

Lastly, recognizing that author one's close relationship with the participants may influence her analysis of the data, we used the technique of peer examination (Bitsch, 2005; Krefting, 1991) throughout the analysis by discussing our analysis on an ongoing basis, and examining each other's interpretations of the data in order to uncover personal biases.

## **Findings**

Based on our analysis of the observational narratives, field notes, interview transcripts, and children's digital stories, we found that the tutor played several important roles in supporting children during the DS process. Firstly, we found that the tutor's flexibility afforded children the space to select a variety of modalities to represent meaning in their stories. Secondly, we found that the tutor helped maintain children's desire to craft narratives. We also found that the tutor supported children as they navigated and used the digital tools available to them. Lastly, we found that the tutor encouraged the children to self-reflect about their strengths and weaknesses during the DS activity.

### **Tutor's role in helping children select modes to best represent meaning**

We found that the tutor's flexibility during the DS activity played a major role in how the children used the various modalities available to them to represent and understand meaning. We found that the children often drew upon image as the best mode to gather,



generate, organize and represent story ideas as well as to prompt proofreading, editing and revising of their work. It was up to the tutor to not only create the opportunity for children to use those modes as part of the activity, but to also recognize and value the meaning making and literacy learning that occurred through those modes.

***Images were used to gather, generate, and organize story ideas***

Among many other items, the tutor offered the children colouring books with a variety of characters in them during the DS activity. The children specifically selected these colouring books and used them as springboards to gather, generate and organize their story ideas. For example, both children flipped through the colouring books and selected which characters they wanted to include in their story. The ways children used these images to generate and organize their story ideas, however, were unique and idiosyncratic. The following observational narrative from the perspective of the tutor illustrates how she helped Zackary use images to gather, generate and organize his story ideas:

I explained to Zackary that he could use the colouring books to select characters for his story or give him ideas for his characters and/or story. I also told him that he could use the sketchbook to draw his own characters or brainstorm ideas for his story. Zackary reached over to retrieve one of the colouring books. He flipped through the images. As he flipped through the images, he said, “No, no, no,” until finding an image he likes. “*This one!*” he said when stumbling upon an image of a cat with a collar. He ripped out the page and continued to flip through the pages in the colouring book to select another character for his story. He then stumbled upon a page with two birds and a spider and said, “*Oh, and I want birds in my story too, and a spider!*” He continued to flip through the pages and stumbled upon another image of a cat, but without a collar. He said, “*I want to have a problem and I know what the problem is – the cat can’t take that thing [collar] off!*”

In this narrative, Zackary used the details from the image he selected from the colouring book to generate ideas about both the conflict and resolution of his story. Upon seeing two images of a cat with and without a collar, Zackary was prompted to discuss the problem for his story that the cat could not get its collar off. He then pointed to the second image of a cat in the colouring book without a collar and explained that the image of the cat without a collar would represent the resolution: “*When the cat finally takes the collar off.*” These story elements are shown in Figure 1.

## Miley Cannot Take His Collar Off

By [REDACTED]

Once upon a time, there was a cat. His name was Miley. Miley was feeling hot so he decided to go out to the backyard.



Then, he was thirsty so he drank some water. After he finished his water, he saw his friends.

He walked toward his friends to ask them for help because his collar was chocking him.



He asked the spider if he would rip his collar off.

And the spider said "yes."



When the spider ripped the collar off the cat, Miley said “ah ah ah ah ah ah.” The spider was not strong enough so the birds came to help and Miley said “ah ah ah ah ah.”



The birds were not strong enough so they all helped.

Finally, it worked!

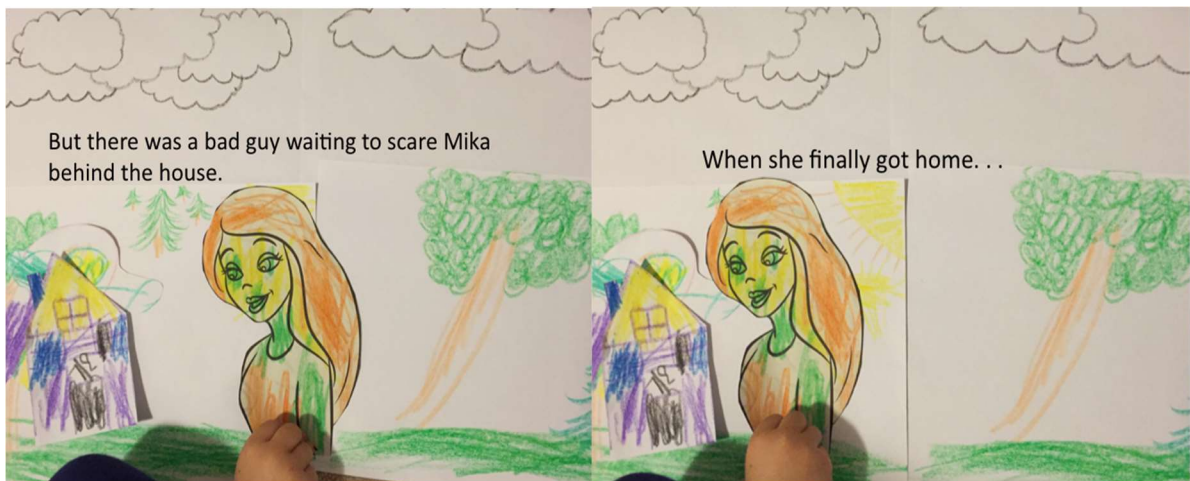
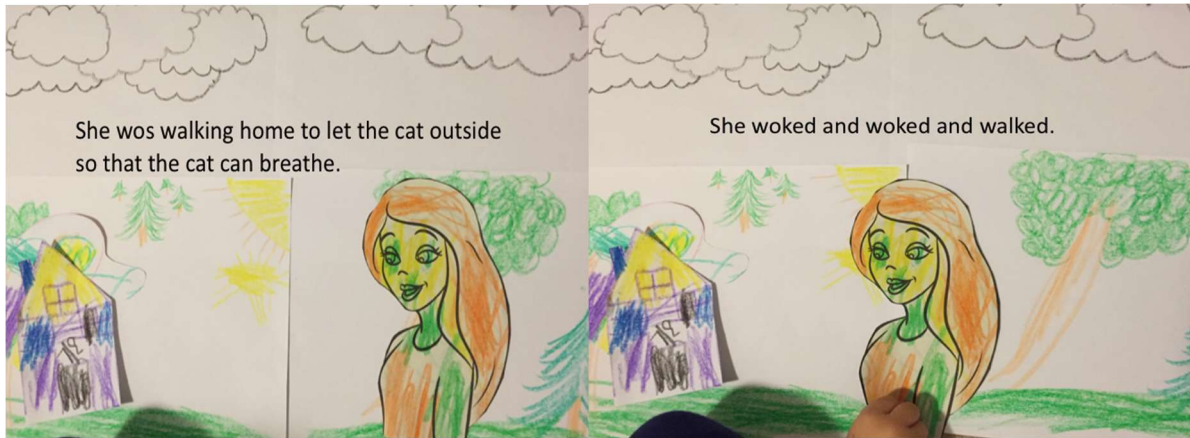
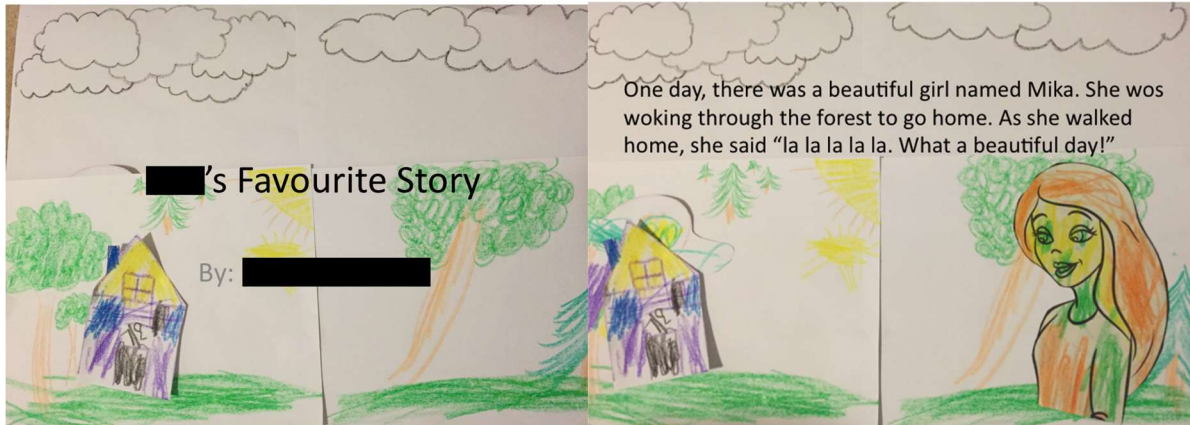


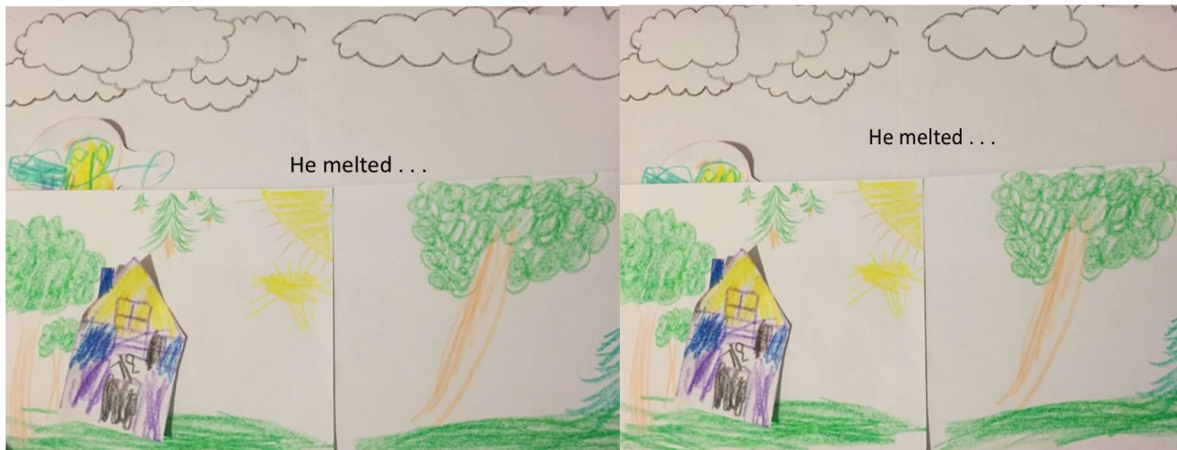
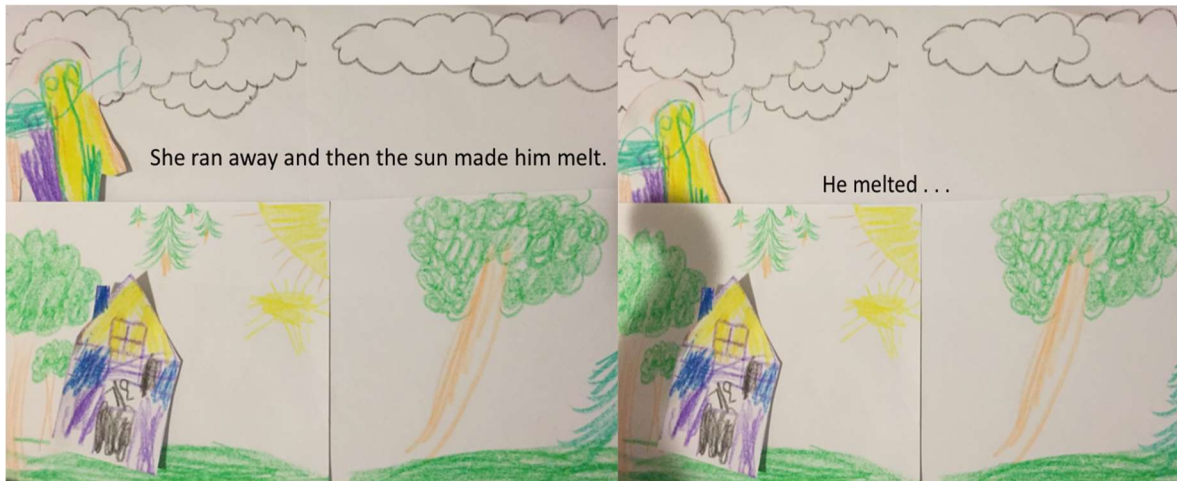
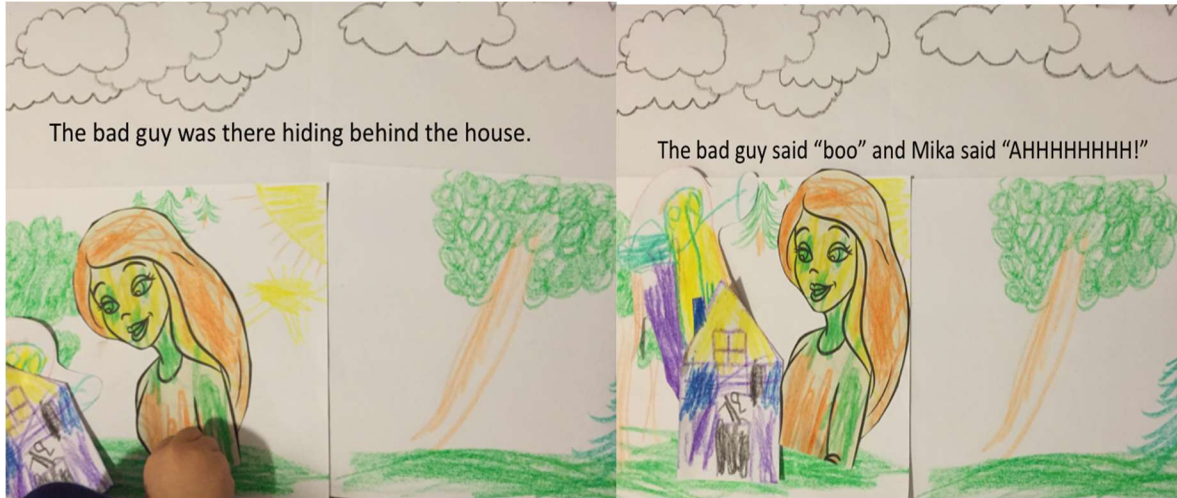
FIGURE 1 Zackary's digital narrative

The following observational narrative illustrates how Rey used images to gather, generate and organize his story ideas:

Rey selected an image of a girl and a cat from the colouring books offered to him. He then reached over to retrieve the sketchbook and began drawing an image to represent the villain for his story. He cut these images out and coloured them. He then decided to draw an image of a house. He cut the image of the house out from the sketchbook and used all the images as props to dramatize his story. Rey placed the villain on top of the image of the house he drew and began to move the image of the girl closer to the house. He let out a scream “AHHH” and pulled the girl away from the house. He then said, “No!” as he did not agree with this plot for his story and began the process over again; this time he included the image of the cat. “That’s my story,” he said, once satisfied with a plot for his story.

As shown in the observational narrative above, Rey used the images of the characters he selected from the colouring book and the ones he drew as props to help him gather, generate, and organize his story ideas. He moved the images of these characters around an imaginary storyboard, enacting various story plots until he officially committed to a single plot for his narrative. Rey’s story is shown in Figure 2.





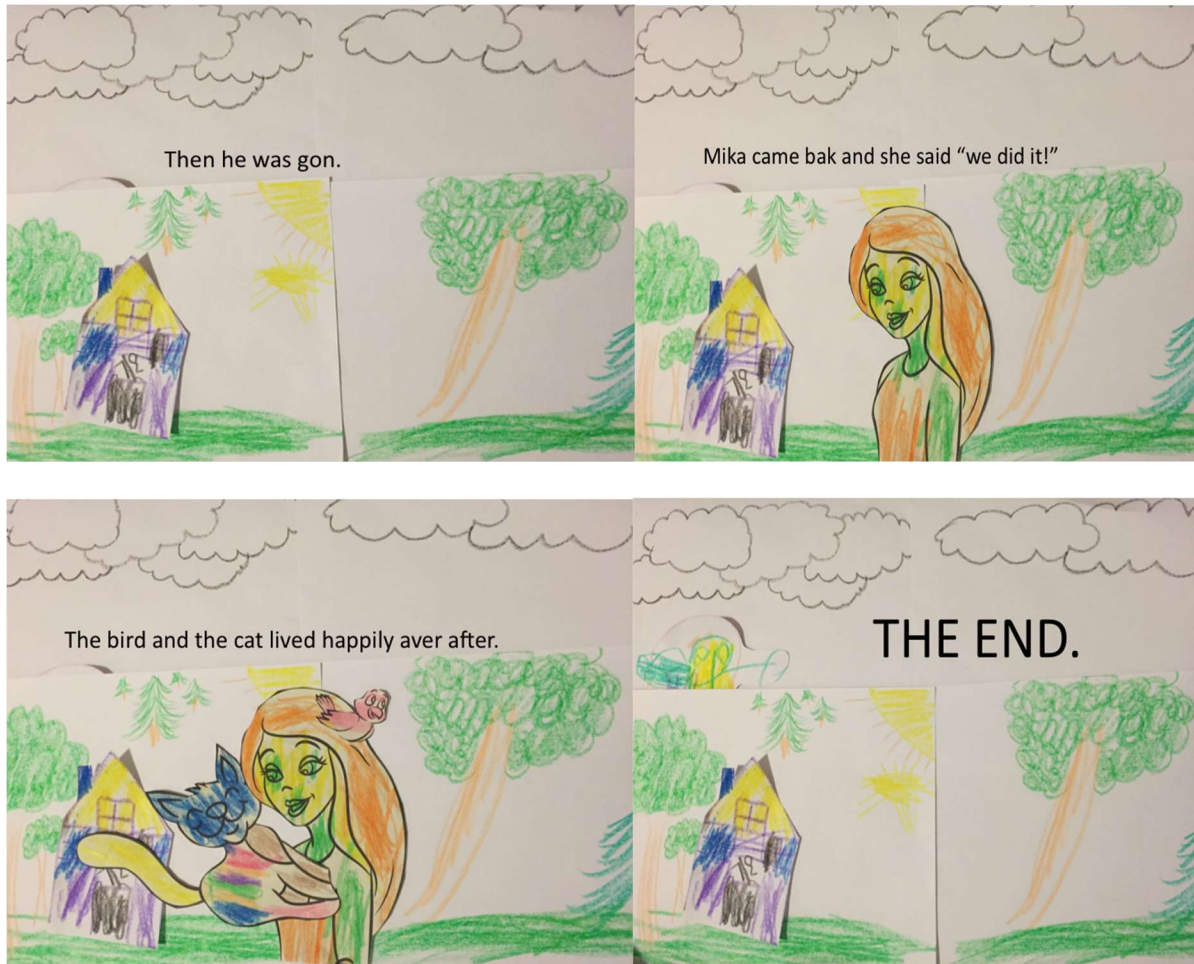


FIGURE 2 Rey's digital narrative

Although image was not the only mode Zackary and Rey used when gathering, generating or organizing their story ideas, image did appear to be the driving force for all other modes they used, prompting them both to enthusiastically move across modes as they carried out the DS task. Using images with other modes also transformed the nature of the activity beyond just moving images around a table. The tutor's flexibility, and, in turn, the flexible nature of the activity, transformed the children's storytelling and writing experience into an active, engaging and authentic one. The children had the flexibility to move, resize, layer, recolour, and insert text over the images after transferring their story images onto PowerPoint. Figures 1 and 2 illustrate the storyboards that Rey and Zachary designed and redesigned multimodally both on and off the computer.

### ***Images were used to represent story elements***

Images were also used to represent specific story elements, such as the story's setting. The sketchbooks the tutor made available to the children afforded the children the opportunity

to represent their story settings in greater detail through images – specifically images the children crafted themselves – than through conventional print. The following observational narratives provides an example of how the children used images to depict their story’s settings:

After selecting and colouring the characters for his story, Zackary decided to draw his story setting using the sketchbook I provided him with. He retrieved the sketchbook, then a red crayon, and began to draw a rainbow at the top of the page. Once complete, he drew images of clouds and then he said, “*I don’t know how to draw trees.*” He asked for help. I drew a tree on the right side. Zackary watched attentively. Then he said, “*I’ll do one here*” and began to draw another tree to the left. He coloured in the grass and included a sun at the centre. “*How about a house?*” he asked. “*Sure!*” I responded. He drew a detailed image of a house with three windows and a door. “*There!*” he said, to indicate that his setting was complete.

As illustrated above, Zackary included detailed images of a house, a rainbow, a sun, grass, trees and clouds for his setting, none of which were depicted in the words he used through print to describe his story’s setting. The two words he used in print to describe the setting of his story were “out” and “backyard” (see Figure 1). Rey, like Zackary, included detailed images of a house, grass, trees, a sun and clouds to depict his story setting through print, but only used “forest,” “home” and “beautiful day” to describe the setting through conventional print (see Figure 2). The flexibility the children had in leveraging image as a mode to best depict their story’s setting appeared to streamline their story crafting process. In turn, the children appeared greatly motivated to continue crafting their narratives. In fact, Zackary often asked, many months after the completion of the study, whether he could craft another digital story.

### **Tutor’s role in helping children proofread, edit, and revise their narratives**

We also found that the Spell Check As You Type (SCAYT) function on PowerPoint, prompted children to proofread, edit and revise their work, and did so in ways that were dictated by the children rather than the tutor or the assignment, but it was the tutor’s role to explain such unfamiliar computer functions to the children so that they could take full advantage of its benefits for learning. The following observational narrative contextualizes our findings:

As Zackary typed up his story, he misspelled the word “collar”, spelling it as “koler.” Upon seeing the red line appear underneath his misspelled word, Zackary asked: “*why is that underlined in red?*” I proceeded to explain that the computer identified misspelled words with a red underline, at which point Zackary became determined to find the correct spelling for the word. He experimented with each sound, replacing the letter K with the letter C or changing the letter O with the letter A until the red underline disappeared. Once he found the correct spelling for collar, he celebrated, enthusiastically shouting, “*Hurray!*” and gave me a high five.

As illustrated in the above observational narrative, the tutor explained the SCAYT function to the children, but the tutor also omitted the fact that the computer could correct the misspelled word for the children. In so doing, the tutor ensured that the children took on an active role in discovering the correct spelling of the misspelled words, rather than getting the computer to correct the spelling of these words for them. Zackary himself also acknowledged the positive effects of the SCAYT function on PowerPoint when asked how the DS activity helped him create his story. During our conversation with him, Zackary said: *“It [the SCAYT function] helped me how to write and read and stuff. It helped me how to read and write stuff like ‘collar.’ I didn’t know how to write it before.”*

However, we found that the SCAYT function, at times, distracted the children from completing sentences for their narrative. The children would stop mid-sentence when seeing a word underlined in red because they were determined to discover the correct spelling of the misspelled word; and in the process, the children would forget what it was that they wanted to type for their story. The tutor played a significant role in moving the DS activity along in cases such as this one – a theme that we discuss in the following section of our paper.

### **Tutor’s role in maintaining children’s desire to craft narratives**

We observed that the participating children often exhibited signs of lost interest in the DS activity when a certain task took too long for them to carry out. For example, when it took too long for the children to discover the correct spelling of a word upon seeing the SCAYT function identify misspelled words, the children would look away from the computer screen, scanning the room to find another task that would meet their interest. We also noticed that when it took too long for the children to find letters on the keyboard as they were typing up their narratives, the children became restless and were beginning to lose interest in crafting their narratives. As soon as the children exhibited signs of restlessness and/or disinterest the tutor would intervene and assist the narrative crafting process for the children by helping them find certain letters on the keyboard, offering to be a scribe, helping them quickly discover the correct spelling of misspelled words or simply encouraging them to continue despite recognizing that they misspelled a word. In so doing, the tutor was able to maintain the children’s interest in the DS activity, and in turn alleviate any frustrations that could have occurred thereafter. The following observational narrative contextualizes these findings:

Rey began to type up his story and enthusiastically looked for the appropriate letters on the keyboard to spell words and form sentences. When typing the word “walked,” he sounded out each letter as he presses the keys on the keyboard. He first pressed W on the keyboard. He then pressed the letter O, followed by the letters K, E, D. He saw the word “woked” underlined in red, which prompted him to ask why the red underline appeared. After explaining the SCAYT function to Rey, he attempted to discover the correct spelling of the word. He replaced



the letter O with the letter A, but still saw the word underlined in red. He then replaced the letter E with the letter I, but saw that it made no difference. Rey let out a sigh, “*Ugh!*”, at which point I offered to be his scribe. Rey accepted my offer and dictated his story with ease.

The tutor also played a significant role in capturing children’s interest from the onset of the DS activity by selecting books to examine and discuss what appealed to the children. The books selected were either books that children themselves expressed they enjoyed reading or were books that covered topics of the children’s interest, such as superheroes. During the children’s interviews, they themselves stated that engaging with storybooks that reflected their interests contributed to their desire to craft their own narratives. Appealing to their interests in this way motivated the children to design or create particular characters, imagine the events and happenings (or conflicts) that the characters encountered, set up the place and space of the story, and develop the story plot and structure. We found that those aspects that the children were most interested in when they examined their respective storybooks were the aspects that the children chose to infuse in their own narratives during their DS process. The tutor was able to tap into the children’s individual interests by drawing on these aspects when teaching them how to craft their narratives. For example, Zackary decided to include animal characters, as well as a theme of repeated words (e.g., Ah, ah, ah, ah, ah) just as in the Robert Munsch stories he examined in the initial phase of his DS experience. Rey decided to include a “bad guy,” a conflict with this “bad guy” and a happy ending just as in the Power Ranger books he examined in the initial phase of his DS experience.

We also found that affording space for children to make meaning multimodally was crucial to maintaining children’s desire to craft their narratives. The tutor provided that space by carefully observing the children when they used various modes to make meaning and by making a conscious effort to value the children’s idiosyncratic multimodal ways with words (Heath, 2013). In so doing, the children were able to craft narratives in ways that were most interesting, relevant and, thus, meaningful to them. When learning was meaningful to the children, we found that they were very engaged and thus tended to put more effort in the narratives they crafted.

Additionally, we found that the idea of distributing children’s narratives to family members and friends upon completion was an exciting prospect for the children. This prospect encouraged the children to complete their narrative tasks in a timely manner so that they could officially share their narratives with others. We also found that this prospect encouraged the children to put more effort into the narratives they crafted. For example, when Zackary discovered the SCAYT function on PowerPoint, he expressed that he would like to correct the spelling of each word before sharing his narrative to his parents and friends at school. Thus, introducing the idea of distributing the children’s narratives to others

at the onset of the DS activity played a significant role in maintaining children's interest and it contributed to the amount of effort children put into the narratives they crafted.

### **Tutor's role in supporting the navigation and use of digital tools**

We also observed that the participating children often required support navigating and using the digital tools that were available to them in the following ways: uploading photos onto the computer, importing the photos onto PowerPoint, resizing the photos on PowerPoint slides, adding and superimposing text boxes on PowerPoint slides, shifting text boxes around the slide for designing/aesthetic purposes, and finding certain letters on the keyboard. We viewed these moments as opportunities for the tutor to collaborate with the children during the DS activity. These moments afforded the tutor the opportunity to identify gaps in the children's knowledge about making meaning digitally/multimodally, and provided space for the tutor to support the children explicitly by teaching them strategies for working with specific features of their digital stories. The following observational narratives provides an example of how the tutor supported children navigate and use the digital tools:

Rey began to type up his narrative, pressing the letter keys on the keyboard, but nothing showed up on the screen. Rey exclaimed, "*It's not working!*," at which point I explained that first a textbox was needed to type up the story. I showed Rey how to insert a text box. Once I inserted the textbox, Rey officially typed up his story. But once he completed typing up the sentences on that page, the text box disappeared. "*Where did it go?*" Rey exclaimed. I swiped on the mouse-pad and clicked a few buttons to superimpose the textbox that disappeared.

### **Tutor's role in encouraging self-reflection**

Our interview data revealed that the tutor played a significant role in encouraging children to reflect on their DS process for the betterment of the children's narrative writing skills. We noticed that the questions the tutor asked during interviews at times probed children to reflect on and identify strategies that the children found most helpful to them during their DS process (e.g., when Zackary expressed that the SCAYT function helped him to spell words like 'collar'), areas for improvement, as well as their strengths as a writer - all of which are important curricular goals for students in grade one (Ministry of Education, 2006). For example, Zackary identified the length of his narrative as an area for improvement when stating: "*I want to change the book more longer, like a chapter book.*" Later, Zackary identified a strength, saying that his narrative had a theme (e.g., repeating words) and that he would like to craft more narratives that are linked through the same theme, like Robert Munsch did in his books. Rey, for example, identified his entire narrative and narrative writing process as a strength, stating: "*I can't say it; it's already even better.*" Although the children, particularly Rey, did not provide extensive feedback for themselves as to how to improve their narratives, we believe that with strategic probing, tutor can help guide children like

Key to self-identify areas for improvement. We believe that when children self-identify their strengths, areas for improvement, and helpful strategies during the narrative crafting process in lieu of tutors, teachers, educators or more capable peers explicitly providing them with feedback on their strengths and weaknesses, the writing process will become more meaningful for the children as they will feel included in the assessment process. Thus, the children will be more likely to acknowledge and work on their areas for improvement and/or draw on the strategies that they find helpful during the DS activity when having to once again craft narratives.

## Conclusions and implications

The overarching goal for this study was to use a DS activity to support two struggling writers in developing their conventional print and writing skills, thereby meeting the literacy skills-based curricular expectations of their schools. However, if our aims were different, if our goal was, for instance, to solely support children in learning about the narrative genre or to solely encourage the process approach to writing, we would have encouraged different ways to compose texts that transcend the traditional skills-based practices valued in and out of school. For instance, voice animation could have been used to digitally tell tales. In doing so, the digital tools available could have further alleviated the children's frustrations of not being able to develop or retain their ideas due to the time-consuming process of meeting print conventions. Also, the use of voice animation would have redesigned the entire DS activity in such a way that made the use of technology more of a necessity to carry out the DS activity rather than an accessory (see e.g., Romrell, Kidder and Wood, 2014). However, the use of technology was, indeed, a necessity for this study's DS activity (e.g., self-editing their language using the SCAYT function on PowerPoint, viewing the story using Present mode), and aided in the two children meeting the skills-based curricular demands of school.

Our findings support previous research recognizing that the implementation of flexible and open-ended activities where children can represent meaning in ways that are interesting, relevant, meaningful (e.g., Bran, 2010; Peterson, 2008), as well as purposeful, authentic, and passion-led (Anderson, 2016) can help to motivate and engage children in learning. The two children in our study, who had previously found writing very challenging, remained enthusiastically engaged throughout the DS activity because they had the flexibility to use new modes that were meaningful and relevant to their own interests and lives, and the tutor both directly (proximally) and indirectly (distally) encouraged the children to do so. Learning that is personalized and connected to learners' interests and multimodal ways of meaning making through the use of digital composing activities have the potential to transform their literacy experiences positively (Romrell, Kidder & Wood, 2014). Our findings also reinforce previous research recognizing the need for support and guidance from

teachers to navigate the complex process of composing texts multimodally (Macleroy, 2016a; Neville, 2010), and that guided interaction is, indeed, an effective approach in supporting children develop operational skills with digital tools as well as supporting children's positive dispositions toward learning (e.g., Plowman & Stephen, 2007).

The one-on-one tutoring aspects, especially the proximal interactions, of our approach allowed learners to receive direct support from the tutor (e.g., to insert text boxes, understand the SCAYT function etc.), and it enabled the tutor to collaborate more closely with the learners in co-constructing their digital stories. Thus, we recommend the creation of curricular spaces for one-on-one conferencing in the classroom so that children can receive the individualized support they need to carry out and learn from such a task. During these one-on-one sessions, teachers can, for instance, bridge traditional and digital forms of storytelling to meet skills-based curricular demands of school like we did in our study, support children as they navigate and use the digital tools, and maintain learners' motivation throughout the task by enabling them to select modes, materials and stories that capture their interests. These conferencing sessions need not be longer than a few minutes, where teachers step in, provide support/feedback and step out so that children can carry out the task at hand. However, more resources may be required to effectively carry out such one-on-one conferencing sessions in real-life classroom practice contexts. During these conferencing sessions, teachers can also encourage self-reflection, which has important implications for learners' capacity to develop new practices, skills, and strategies required for adapting to their digital environment (Leu, Kinzer, Coiro & Cammack, 2007). Furthermore, children can be encouraged to think critically about literacy and dismantle existing literacy hierarchies.

Although our findings were based on a small-scale study, our findings points to the need for future research on how DS activities, like the one described in our study, can be carried out in mainstream classroom settings, considering the practical limitations of real-life classroom practice contexts. Given the wide availability of digital storytelling platforms other than PowerPoint today (e.g., Microsoft Photo Story, Powtoon, Moovly, MyStoryBook, Scribjab), we encourage more research on DS activities that can go beyond traditional forms of storytelling and challenge dominant cultural values – DS activities that value other forms of literacy (e.g., voice animating stories) commonly viewed as inferior to traditional skills-based practices (e.g., writing a story using knowledge of sound-symbol relationships). In so doing, teachers can further enhance children's self-expression and empowerment, (e.g., Macleroy, 2016a). and espouse literacy practices that further eschew the “digital makeover” syndrome (Lankshear, Snyder & Green, 2000, p. 102).

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