An Inquiry Into the Possibilities of Collaborative Digital Storytelling

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This article explores the possibilities of incorporating collaborative digital storytelling into preservice teacher education to support teachers in learning about their students' rich perspectives on teaching and learning. Data were gathered in an elementary literacy methods course at a public university in the northeastern United States to explore the possibilities of a digital storytelling collaboration between undergraduate preservice teachers and elementary students. The article concludes with a discussion of ways teacher education researchers and practitioners might utilize digital storytelling to keep record of the ways diverse students experience teaching and learning.

The use of case studies in teacher education in the United States has been a popular practice since the early 1980s. As Darling-Hammond and Hammerness (2002) described, the practice of encoding classroom observations in writing can support preservice teachers in reflecting within frames of research and theory. Further, the act of documenting observations makes the experience available to a community of peers, bridging the gap between personal situated knowledge and sharable, generalizable knowledge. At this same time, video-based case study analysis emerged with a focus on the use of video for reflective analysis in teacher education (Schön, 1987).

More recently, collaborative narrative inquiry has emerged as a practice to further support teachers in their efforts to document, reflect, and share their classroom experiences. Lachuk et al. (2019) described the importance of collaborative narrative inquiry in preparing teachers who build trusting relationships with their students and families, by consistently interrogating the relationship between their values and their teaching practices to make courageous instructional decisions that emphasize morality and justice. They further articulated the important role that collaborative narrative inquiry played in their own efforts to prepare preservice teachers to practice instructional integrity in the classroom.

Learning about students' lives to build trusting relationships with families that support relevant pedagogy is not new. Moll et al. (1992) engaged in extensive qualitative research with working-class Mexican students, families, and their teachers living on the United States border to learn about the cultural and community assets that students brought with them to school. Their theory of funds of knowledge reframed perceptions of students from underresourced communities as at a disadvantage because they are economically poor to engaged students who enjoy a wealth of high-quality experiences at home.

Similarly, Ladson-Billings (1995) inquired into the successes of African American students at a time when many viewed these same students through an at-risk lens. Her theory of culturally relevant pedagogy grew from research with classroom teachers who experienced pedagogical success with their African American students. She has since called for a shift from culturally relevant pedagogy to culturally sustaining pedagogy (Ladson-Billings, 2004), with the recognition that culture is ever changing. Both funds of knowledge and culturally sustaining pedagogy stem from research with educators who were deeply embedded in the communities in which their students lived. Learning about students' lives outside of the classroom is no easy task for preservice teachers who are often new to the school communities in which they will be teaching, especially with young children whose language skills are emerging.

As a teacher educator working to prepare preservice teachers with the types of knowledge and dispositions articulated by the research just described, I embraced collaborative narrative inquiry as a response to traditional case studies (Darling-Hammond & Hammerness, 2002). When written by my preservice teachers, traditional case studies most often took on the discourse that Fine (1994) described as writing *about* students as *other,* thus securing privilege. In response, I invited preservice teachers to engage in collaborative narrative inquiry through the process of digital storytelling (Hull & Katz, 2006; Lambert, 2010), which allows for the inclusion of student voice in the inquiry process, as well as different forms of representation through the affordance of digital media.

This article describes my exploration into the possibilities of incorporating collaborative digital storytelling into preservice teacher education in an effort to support preservice teachers in learning about their students' rich insights and perspectives on teaching and learning, as well as to inquire into ways in which their teaching practice can support the literacy learning of diverse youth who are engaged in multimodal literacies that move

across spaces of home, community, and school. Specifically, I draw on data gathered in an elementary literacy methods course taught at a public university in the northeastern United States to explore the possibilities of a digital storytelling collaboration between undergraduate preservice teachers and elementary students in a public school setting.

In what follows, I describe what emerged though data analysis grounded in a conceptual framework based within research on collaborative inquiry and multimodality to discover the learning that materialized and the nature of the relationships that were fostered through the process of collaborative digital storytelling. I conclude with a discussion of how literacy researchers and practitioners might build on similar projects to keep record of the ways that diverse students are experiencing teaching and learning in the literacy classroom.

Digital Storytelling in Preservice Teacher Education

Research on technology integration for preservice teachers has focused on the beliefs and technological expertise of the current generation of preservice teachers, many of whom have grown up with interactive digital technologies to prepare them to integrate technology into their classroom (Lei, 2009). However, as Lewis (2007) argued, technology integration demands, not only that teachers become proficient in the use of interactive technologies for teaching and learning, but that they acquire new orientations to time, space, performance, and design in schools: "Popular technologies are to be used and shared out-of-school. To do so in school challenges the materiality of what it means to be a teacher, in their minds" (p. 235). The project described in this article worked to create a new way of thinking about incorporating digital technologies into elementary schools to allow preservice teachers to rethink their identities as teachers in diverse public school classrooms.

Hull and Katz (2006) discovered how digital stories crafted in a supportive environment provided powerful opportunities for forming and giving voice to agentive selves. Further, they articulated how digital stories give rise to conceptions of self that shed light on how and why we humans learn as we develop a sense of who we want to be. The telling of self-narratives created for an audience allows authors to make meaning of their experiences, which can change their thoughts and feeling in the process.

These stories, regardless of the imagined audience when designed, have the potential to change the thoughts and feelings of those who view them as well (Lambert, 2010). In this research, allowing preservice teachers to craft digital stories collaboratively with students from social and cultural backgrounds that might be different from their own had the potential to reframe their views of students away from a deficit lens (e.g., Lareau, 2003; Rogers, 2003).

Consistent with these findings that designing digital stories in out-of-school settings provides space for agentive possibilities for identity construction (Hull & Katz, 2006; Lambert, 2010), embedding digital storytelling into preservice education courses has been shown to foster environments that allow preservice teachers to see themselves as

stakeholders in their own learning (Lohnes Watulak, 2018). Further, Shelton et al. (2017) argued, "When embedded in relevant course content, creating a digital story can be a way for teachers to experience constructing deeper knowledge through inquiry" (p. 59).

Drawing on the work of Delgado (1995), Vasudevan (2006) described how storytelling in qualitative research can offer insights into multiple ways of knowing, which disrupt grand narratives of students from nondominant backgrounds, such as "at risk" and "underperforming." She further argued, "Not only do we need different stories, but we also need to seek out and construct stories in different ways" (p. 208).

The research described here drew on these successes of incorporating digital storytelling into preservice teacher education to inquire into the possibilities of preservice teachers and students working together to design collaborative digital stories. In this way, I worked to realize the call to provide opportunities for different types of stories to be told in public school settings.

Collaborative Digital Storytelling as Inquiry

Much research supports collaborative inquiry in preservice teacher education amongst teacher education faculty (Johnson Lachuk et al., 2019) and as part of collaborative school-university partnerships (Harlow, 2014). Johnson Lachuk et al. described the critical nature of collaborative narrative inquiry for preservice teachers to interrogate their beliefs and practices through intentional conversations as they prepare to work in culturally diverse classrooms. The collaborative digital stories in this research were designed as opportunities for preservice teachers and their students to engage in intentional conversations about their beliefs and experiences as they learned in the classroom together.

Galletta and Jones (2010) engaged in a research collaboration with undergraduate preservice teachers and secondary students through a university-public school partnership, where they sought to create a project in which preservice teachers' and students' funds of knowledge were equally valued. To do this they engaged the preservice and secondary students in a filmmaking project, exploring resources and experiences in their community. Their findings revealed both the power that collaborative digital filmmaking can have for youth to become agents of change through the inquiry process, as well as many of the challenges in navigating relationships between preservice teachers and secondary students living in poverty.

The project described in this article builds on the body of collaborative narrative inquiry research by creating a space for collaboration between preservice teachers and elementary students as they learned together in the literacy classroom. Here, the imperative of collaborative narrative inquiry and the call for different types of storytelling intersects with the possibilities of multimodal composing, wherein new digital technologies can be used to create not only new kinds of texts but also, as Vasudevan (2006) described, "new kinds of spaces for storytelling and story-listening" (p. 208).

Digital storytelling offers possibilities for alternate subject positions to emerge when the right of storytelling is reclaimed by the storied. In the research presented in this article, there are layers to what constituted whose story was being documented, as preservice teachers were positioned as both student and teacher, and elementary students were positioned as both student and collaborator and, in some instances, teachers themselves.

The affordances of digital media for storytelling allow for what Hull and Nelson (2005) described as the expressive power of multimodality. They described multimodal composing as not simply increasing the meaning-making potential of a text by adding images, sounds, and written language but instead drew on the concept of braiding (Kress & van Leeuwen, 2006) to illuminate how a multimodal text can "create a different system of signification, one that transcends the collective contribution of its constituent parts" (p. 225).

Bringing a multimodal lens to this research can shed light on the meaning making of preservice teachers and their students in relation to the collaborative digital stories they constructed. A multimodal theoretical lens considers how combining different modes within a text allows for meaning to be made in different ways (Kress, 2003), while illuminating how meaning making is experienced across multiple modes as not separate but as combined. This field of study also recognizes the potential of modes other than written language to have powerful meaning-making possibilities, despite traditional understandings that written language has the greatest potential for meaning making.

Analyzing texts through a multimodal lens links social practices with representations (Pahl & Rowsell, 2006). Thus, I drew on Kress' (2003) multimodal theory in analyzing the digital texts that centered this research to illuminate how the teaching and learning experiences in which preservice teachers engaged as they constructed their collaborative digital stories were situated within a much wider communicational landscape.

Specifically, Kress' (2003) framework required the consideration, not only of how any text is shaped by its material form, but how that form is shaped by the discourses that circulate the spaces in which the text was produced. Such an analytic framework is essential for understanding how the discourses that surrounded teaching and learning in this study shaped and were shaped by the types of learning experiences that preservice teachers and their students engaged in throughout this study.

In what follows I describe the evolution of the preservice literacy methods course and the accompanying elementary collaborative reading program, where preservice teachers and their students engaged in collaborative digital storytelling as a way to make meaning of their shared learning.

Research Methodology

This research project was grounded in my efforts to support preservice teachers enrolled in an undergraduate literacy methods course, as well as my efforts to support children at a local public elementary school where

the preservice teachers engaged in fieldwork. As such, I took up Cochran-Smith and Lytle's (2009) notion of *inquiry as stance,* which recognizes the capacity of practitioners widely conceived (e.g., school administrators, classroom teachers, teacher educators, and preservice teachers) to work collaboratively in an effort to reform education in democratizing ways.

Inquiry as stance recognizes practitioners as generators of knowledge who use data gathered at sites of professional practice to inform pedagogical practices that create improved educational opportunities for students. To work from and with an inquiry stance

involves a continual process of making current arrangements problematic; questioning the ways knowledge and practice are constructed, evaluated, and used, and; assuming that part of the work by practitioners individually and collectively is to participate in educational and social change. (Smith & Lytle, 2009, p. 120)

In designing this research I acknowledge the blurred lines between inquiry and practice, and as such, I worked to make visible the ways in which data collection and analysis were informed by tenets of practitioner research as well as the conceptual framework that guided this work.

Project Context

Data for this research were gathered across two sites, in an undergraduate literacy methods course taught at a public university in the northeastern United States and at Sunrise Elementary School. (All names, including the school and those of participants and their students, are pseudonyms.) Sunrise is located in a neighborhood surrounded by public housing and, at the time of this research, enrolled 400 students, 49% of whom were African American, 42% of whom were Latino, and 32% of whom received special education services. To understand the context in which data were collected for this research, this section describes the evolution of the digital storytelling project.

As with many elementary literacy methods courses across the United States, the course in which participants for this research were enrolled has a fieldwork component where preservice teachers spend time in a school practicing what they learn through course readings and lectures. Five years ago, I partnered with administrators at Sunrise who were not only willing to allow the preservice teachers enrolled in my literacy course to work with their students but offered a resource room filled with thousands of books organized in leveled libraries for preservice teachers to use with their students.

Due to the high rate of Sunrise students in foster care and transitional housing, the school employed a counselor dedicated to supporting families who need additional resources. Recognizing an opportunity to move beyond thinking about the school as a site for field placement, I worked with the administration, teachers, and counselor to develop a program that allowed for Sunrise teachers to send students for 1 hour a week during the school day to the resource room to work one on one with a preservice

teacher. Students at Sunrise are now familiar with the program, and many request to be chosen to participate, as it is known as a fun place to learn.

In the first 2 years of the program, preservice teachers documented their own and their students' learning in writing through a multistep case study project (Darling-Hammond & Hammerness, 2002). As I read through the projects at the end of each term, I noted that they did not seem to capture the dynamic nature of the work that I observed each week. As such, I began to encourage them to use multimedia (e.g., audio and video recording and photographs of student work). Drawing on the work of Lambert (2010), the written case study project evolved into a digital storytelling presentation. For the last three semesters we included the elementary students as cocreators of the collaborative digital stories, in a move toward acknowledging the shared space of learning for all of us (professor, preservice teachers, and elementary students) in our reading program.

The research presented in this article is drawn from the most recent cohort to participate in the collaborative reading program. Nineteen second-grade Sunrise elementary students, who were demographically representative of the school, were randomly paired with a preservice teacher. Each week preservice teachers met with their student in the resource room to practice assessment and teaching strategies based within a balanced literacy model (Fountas & Pinnell, 2001) used throughout the school district. During this time, I as the instructor circulated the room to provide support to preservice teachers as they engaged in their fieldwork teaching.

The Collaborative Digital Storytelling Project

The collaborative digital storytelling project described in this article began prior to the first day of fieldwork with a discussion of the following description of the project:

Throughout your fieldwork hours, you and your student will design a digital story that showcases what each of you learned throughout your fieldwork journey over the semester. The story should highlight what you each learned about learning to read and teaching reading including strengths you noticed and areas of growth you would like to pursue moving forward. You and your student are free to make design choices including structure, format, and digital media tools you use to design your story. There is not a requirement for stories to include photographs, video, or voice recordings of students as some students may not feel comfortable with being photographed or recorded. Your completed story can be no longer than 6 minutes. On the last days of our course, you will present your digital story with the classroom community and reflect on what you learned through the process of teaching your student and creating your digital story.

Grounded in the work of Moll et.al., (1992), preservice teachers engaged in activities prior to fieldwork to support them in learning about their students' cultural backgrounds and everyday experiences at home, in an attempt to make visible their power and privilege in these interactions. These activities were also designed to support preservice teachers in

planning to work with students in culturally relevant and sustaining ways (Ladson-Billings, 2004). Specifically preservice teachers were taught strategies for engaging in critical conversations with their students about learning (Jones, 2006). Further, preservice teachers read about, discussed, and engaged in activities around digital storytelling literature, from which they learned about digital storytelling as a form of digital media creation foregrounding meaning making, collaboration, and amplifying marginalized narratives (Lambert, 2010; Robin, 2016).

Preservice teachers were also provided time to practice using various technologies that could be used for their digital stories (e.g., iMovie and Powtoon) during course lectures and were given opportunities to share new technologies for digital storytelling with each other. On the first day of fieldwork, preservice teachers engaged their student in a conversation about the work they would be doing, which included sharing that together they would be documenting their experience in a digital story. They also solicited feedback from their student about how they might want to go about capturing their learning together.

Participants

This study centered 19 preservice teachers from the most recent cohort of the collaborative reading program, 18 of whom identified as female and one who identified as male. As part of their coursework, preservice teachers engaged in an identity self-study. In an effort to provide a safe space to reflect upon their own cultural backgrounds, preservice teachers were provided an opportunity to share the outcomes of their self-study but were not required to do so. An analysis of preservice teachers who shared their self-study narratives showed the group to be culturally diverse and included participants who identified their own cultural backgrounds as Asian-American, European-American, Italian American, Muslim, and Latina.

Researcher Positionality

My positionality in this inquiry was that of a practitioner-researcher. As I collected data on a program which I both designed and taught, I acknowledge that the data generated in this study represent what Cochran-Smith and Lytle (1999) described as "local knowledge of practice" that can both influence the local context in which this work took place and be useful in other local contexts globally. I further recognize that this work was shaped by my role as a university professor working with university students who were completing a course for a grade. Thus, the data collected and analyzed here must be understood within this context.

Data Collection and Analysis

Data were collected over one 15-week term to address the research questions:

1. What narratives emerge when preservice teachers collaborate with elementary students to create digital stories about their learning?

2. In what ways does engaging in collaborative narrative inquiry through digital storytelling support preservice teachers in developing the skills to build trusting relationships with students?
3. In what ways do digital technologies shape the narratives that preservice teachers and their students produced in their digital stories?

Data included 19 finally produced collaborative digital stories collected from preservice teachers designed with their second-grade students. Additional data include my own reflective fieldnotes written after each reading program session, and lesson plans and teaching reflections written by each preservice teacher. Participants were invited to allow for their materials to be included as data for this study after grades for the course were posted, to minimize preservice teachers opting into the study as necessary for their success in the course.

To address the research questions, data analysis began with multimodal analysis of the collaborative digital stories. As discussed in the theoretical framework, Kress' (2003) multimodal theory leads to the consideration of three distinct aspects that make up any text, the *discourse,* the *genre,* and the *mode.* Thus, I examined each collaborative digital story for each of these three aspects to discover how meanings were conveyed across multiple modes. Specifically, I viewed each story multiple times guided by the following analytic questions derived from Kress' framework:

1. Discourse: What issues were being talked about and how were issues shaped within social institutions (e.g., P-12 schooling, schools of education, social media, and popular culture)? What issues are silent and absent?
2. Genre: Who is involved in the design of the text and what are the power relations among the designers?
3. Mode: How is the collaborative digital story shaped by its material form (i.e., the mode) and how do the modes work together to convey particular meanings?

Codes that emerged through this analysis were mapped onto additional data sources, including lesson plans and teaching reflections. Three text types, *Clinical Academic, Personal Narrative Journey,* and *Superhero Readers* emerged as categories, which are outlined in Table 1.

Findings

This section includes a description of what emerged as I drew on theories of collaborative inquiry and multimodality to discover the learning that materialized and the nature of the relationships built through collaborative digital storytelling. Here I offer insights that can support teacher educators and classroom teachers in leveraging the promise of collaborative digital storytelling as a means for capturing learning in the classroom. Subsections mirror each research question and highlight the ways in which types of narratives and modes of storytelling created space for new ways of recognizing teaching and learning in the literacy classroom.

Table 1
Summary of Data Analysis

	Clinical Academic	Personal Narrative Journey	Superhero Reader
Analytic Question 1 Discourses What issues are being talked about and how are issues shaped within social institutions (e.g., P-12 schooling, schools of education, social media, popular culture)? What issues are silent and absent?	• Reading levels • Grade level/Standards • Improvement • Writing • Texts	• Feelings • Relationships • Vulnerability • Fear • Surprise • Success • Preservice Teacher and Student Culture	• Pop culture • Texts • Student Culture • Goal Setting • Helping
Analytic Question 2 Genres Who is involved in the design of the text and what are the power relations among the designers?	• Preservice as main designer • Preservice narrating • Preservice scripting/student reading	• Collaborative storyboarding • Preservice narrating • Preservice Teacher and Student-led Interviews	• Student as main designer • Student narrating
Analytic Question 3 Modes How is the collaborative digital story shaped by its material form (i.e., the mode) and how do the modes work together to convey particular meanings?	• Slides with paragraphs of written texts • Images of student work • Student narration	• Live action video • Preservice narration • Time lapse video	• Images of student work • Student narration • Images drawn by students

Constructing Narratives: Telling the Story or Letting the Story Be Told

As I observed each preservice teacher and student team working on their digital stories today, I noticed that this semester preservice teachers are engaging the students more in their design choices. Three students are holding their preservice teachers' cell phones and recording. Another preservice teacher is guiding her student as he fills in a blank story map. I'm excited that she has given him so much control, and then during our post reflection she tells me that he actually felt put on the spot and that she needed to adjust her approach to maintain his engagement and involvement. At the end of the session a student comes to me and tells me that he thinks "this is weird." Thinking he is talking about a book that he was reading with his preservice teacher I ask him what in the story was weird. He goes on to say, "This is weird. They are teaching us, and you are teaching them. That's weird." (Reflective fieldnotes, Session 9).

As this excerpt from my reflective fieldnotes illustrates, my attempts at creating a space for preservice teachers and their students to design new ways of recognizing and documenting their learning were at times inconsistent with their school experiences, making one student feel put on the spot and another confused enough to come up and tell me that my class was weird. This result resonated with what Galleta and Jones (2010) discovered in their research collaboration between preservice teachers and secondary students, in which one of the secondary student participants asked, "Why are we doing this?"

As I sought to discover the different types of narratives that emerged in the collaborative digital storytelling process, I was not surprised to find that the discourse of school (both what instruction looks like in elementary schools and what academic learning looks like in college) was a backdrop

by which preservice teachers and their students attempted to make meaning of the space of the digital storytelling collaboration. I was pleased that within this backdrop discourses that are commonly prohibited in school, such as pop culture and social networking, were able to exist within the digital stories.

This new space, which I attempted to open up in an academic setting, was taken up in different ways. Specifically, data analysis revealed three types of narratives that emerged in the digital stories, which I categorized as clinical academic, personal narrative journey, and superhero reader.

Of the 19 digital stories analyzed in this research, eight had a narrative that I recognized as predominantly clinical academic. One defining characteristic of these stories was the linear, summative narrative that was produced. Similar to the formal lesson plans that preservice teachers wrote in the class in preparation for the state certification exam, these stories were framed by descriptions of the diagnostic assessments that informed each lesson that they planned and taught, followed by images of student work that demonstrated that their student had met the learning objectives.

Digital stories with a clinical academic narrative further illustrated what the preservice teacher had learned in the course about balanced literacy, including conducting running records, planning and implementing guided reading lessons, and conferring with students. The clinical academic narrative digital stories highlighted the teaching knowledge that preservice teachers had learned throughout the course and demonstrated their ability to use research-based pedagogical strategies when designing instruction for their students. It further showcased academic learning on the part of the student, such as the ability to use a new reading strategy for comprehension or moving up a reading level.

The digital story created by Ms. Alice and her student Jared, as shown in Figure 1, is an example of a clinical academic narrative. Ms. Alice, who identified herself in the self-study as Italian American, designed a digital story in a slideshow format, where each slide summarized a lesson with accompanying images of student work. In one slide she wrote, "Jared struggled with letter sound relationships. I was able to create a vowel activity for him that helped him identify the sounds in words with -ain."

Figure 1
*Excerpt From Digital Story Created by Ms. Alice and Jared*
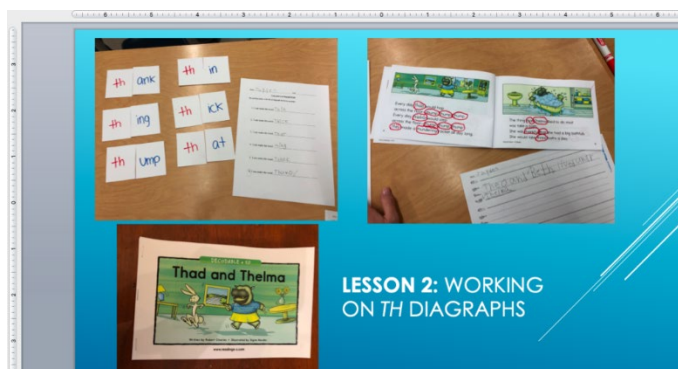
Here, Ms. Alice began with an assessment – "Jared struggled with letter sound(s)" – followed by a description of the instruction she planned to address what she identified as his need. Their digital story also included audio of Jared reflecting on his own learning, "I had a few struggles. I couldn't read *Thad and Thelma*. I learned to sound out the words." Jared added his own slide at the end, which included a selfie photo on the left and a stick figure with a smile face on the right with the words, "I love you," written to his preservice teacher. The inclusion of the last slide showed how, even within digital stories that followed a clinical academic narrative, the affordance of the multimodal format allowed for the embodied relationship between Ms. Alice and Jared to be captured, which was a goal of using collaborative digital storytelling in the fieldwork setting.

I recognized six of the collaborative digital stories as personal narrative journeys. These texts often began with the preservice teacher describing thoughts on the 1st day of fieldwork, which for many included feelings of doubt and insecurity, as for most of them this assignment was their first experience teaching a student in a school setting (see Figure 2). These digital stories included descriptions of efforts by preservice teachers at connecting and building relationships with their student and showed vulnerability on the part of the preservice teacher that was absent in the clinical academic narratives.

Figure 2
Excerpt From Digital Story Created by Ms. Delilah and Liam
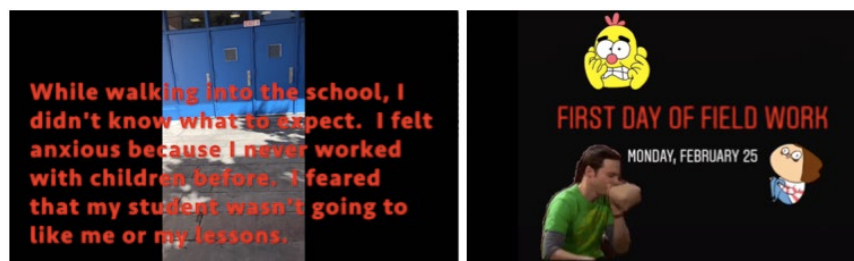
An example of a personal narrative journey is the digital story designed by Ms. Delilah, who identified her culture in the identity self-study as Muslim. Ms. Delilah and her student Liam, who she described in her formal lesson plans as living in a large Mexican family, designed a digital story using iMovie that included humor as they each reflected on their experience working together. Liam and Ms. Delilah's digital story includes video footage of them engaging in their lessons, followed by them speaking directly into the camera as they reflected on their learning. In one frame Liam proclaimed, "I did it," as he placed index cards in a word sort activity.

As the description of Ms. Delilah and Liam's story illustrates, personal narrative journeys described learning both for the preservice teacher and student that went beyond the specific reading skills that were the focus of the preservice teacher's planned lessons. They also highlighted ways in which the pairs learned patience and perseverance. Further, in these stories, preservice teachers discussed how they learned the importance of listening to students to adapt and modify planned lessons to make them engaging and meaningful.

I categorized one of the digital stories as a mixed narrative, as the first 3 minutes were aligned with a clinical academic narrative then shifted to what I recognized as a personal narrative journey, when the preservice teacher and student each held toy microphones and discussed their learning with each other. In the following scene they shared,

> Ms. Diana (looking at student): I feel like, I really was nervous about working with a student, and I feel like you taught me to have more confidence and not be so nervous. And I think that, I feel like I taught you some stuff.

> Maria: Yeah, this was my first time [referring to this being the first time that she was in the reading program]. I haven't done things like this.

> Ms. Diana: It was your first time too? Would you do it again?

> Maria: Yes. [Ms. Diana's Digital Story]

This exchange is illustrative of how the personal journey narratives allowed for new identities for preservice teachers and their students in the literacy classroom, shifting from preservice teachers portraying the work as what they taught their student to what they learned alongside their student.

The four narratives that I identified as superhero readers similarly described learning as a shared experience; however, in these stories the students were positioned as leading the work with the preservice teacher as facilitator. In the superhero readers narratives, students were portrayed as aspiring super readers and literacy superheroes who were able to reach their goals with the support of their preservice teachers. Figure 3 illustrates an example of a superhero reader narrative digital story designed by Ms. Louisa and her student Eliana, where they shared, "[Eliana] has a dream. She wants to be a super reader." Their story, in the form of a slideshow, told the journey of a fairy who appeared at her school and helped give her the tools to become a superhero super reader.

Preservice teachers in these narratives took on facilitator roles such as fairy godmother or sidekick.The four superhero reader narratives each described learning as ongoing, with a focus on both the student and the preservice teacher setting goals and reaching them. These digital stories also centered discourses of pop culture that students shared with their preservice teachers as important in their lives (e.g., Spiderman, NBA, and YouTube).

The language used to describe students differed between the clinical academic narratives and the personal narrative journey and superhero readers narratives. The findings here support the assertion by Boldt et al. (2015) that linear forms of lesson planning, designed to control time rationally, lead to the disappearance of actual children.

Figure 3
Excerpt From Digital Story Created by Ms. Louisa and Eliana
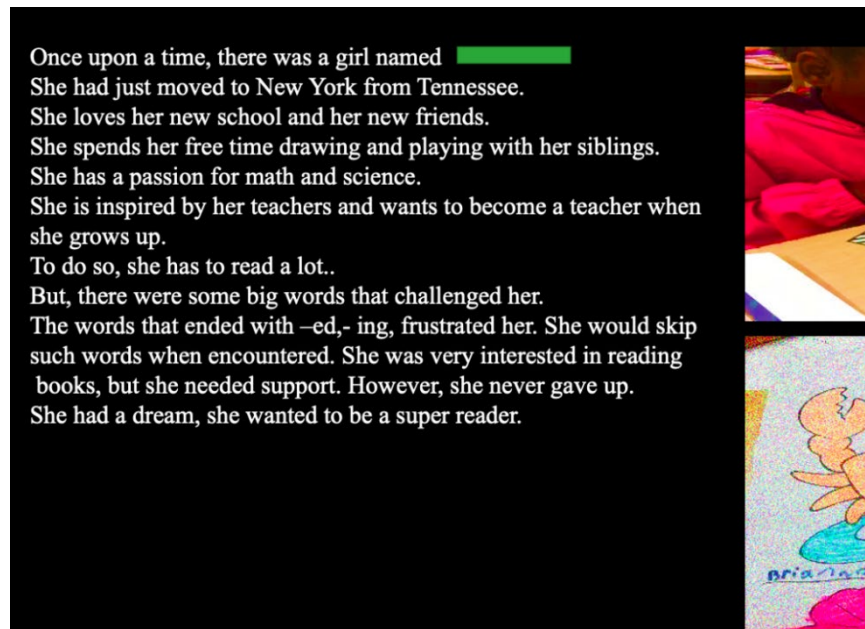
When preservice teachers used academic language describing lesson plans and showed images of student work to demonstrate their learning for each individual lesson, such as those in the clinical academic narratives, the teaching and learning could be read as disembodied (Johnson & Kontovourki, 2016). In contrast, those who designed personal narrative journeys positioned learning as shared and ongoing. Further, those who designed superhero readers narratives centered students as powerful learners who had obtained new skills through dedication and hard work, with preservice teachers playing the role of facilitator. The next section is a description of the relationships that preservice teachers and students fostered through the process of designing their collaborative digital stories.

Honoring Relationships: Moving From Learning About to Learning With

The collaborative digital storytelling project emerged from my efforts as a teacher educator to help the preservice teachers I work with to learn about students' lives within and beyond the classroom and use this knowledge to plan meaningful literacy instruction. Specifically, I aimed to provide space for the preservice teachers to learn about and leverage the unique skills and knowledge that students brought with them into the classroom through the collaborative digital storytelling project. All preservice teachers engaged in activities prior to the beginning of fieldwork to support their efforts to learn about their student's cultural background and everyday experiences at home. Two of the digital stories specifically referenced the student's cultural background. One of these digital stories showed the preservice teacher in the form of an avatar created with the iPhone Animoji feature as she narrated: "When I met [my student] she

asked if I was Mexican and told me she was too. We spoke in Spanish and realized we had a lot in common" (Ms. Liana's Digital Story).

The second digital story that specifically mentioned the student's cultural background began with a selfie of the preservice teacher and student, followed by a montage of images of the student's writing, during which the student narrated in an animated voice, "My favorite color is red. My, I like chocolate, I love chocolate. I have five brothers and sisters. I like reading. I, my family is from Jamaica. The end" (Ms. Susie's Digital Story). Both preservice teachers in these examples chose reading material for their planned lessons that incorporated each student's cultural background.

Although the remaining 17 collaborative digital stories did not explicitly mention the student's cultural background, many of the stories portrayed students as having valuable knowledge and experiences to contribute to the learning environment, both from in and outside of school. For example, Ms. Samantha's student wrote a poem that drove the narrative of their collaborative digital story. In fact, when she presented her story on the last day of class, she prefaced her presentation with, "I have to thank [my student] for the idea for this story. The poem and everything was all her." Ms. Samantha's student was also active on YouTube and was able to use this knowledge to support her teacher, who was not comfortable with digital technology, in filming and editing their story. In another example Ms. Gloria's digital story showed scenes of her student teaching her vocabulary in Spanish, including an audio clip of her student coaching her pronunciation (see Figure 4).

Figure 4
Excerpt from Digital Story Created by Ms. Gloria and her Student

Fine (1994) wrote, "When we opt, as has been the tradition, to write *about* those who have been othered we deny the hyphen" (p. 72). An example of denying the hyphen in teacher education is the way we have traditionally required educators to write about their students' linguistic and cultural backgrounds in formal lesson plans and other documents (e.g., individual education plans), without addressing their own and the relationship between, which can work to further marginalize students. In contrast, the collaborative digital stories positioned students as having valuable

knowledge (e.g., multiple languages, digital technologies, and poetry) to bring to the learning environment, as the preservice teachers did with their newly acquired knowledge of teaching balanced literacy.

Crafting Digital Stories in Multiple Modes: Moving From Writing to Designing

Drawing on the work of Vasudevan (2006) and Hull and Katz (2006) described above, this research was designed to investigate the possibilities of using digital media in an effort to create space for new stories about both the learning and relationships between preservice literacy teachers and elementary students. Thus, in this final section I discuss how the collaborative digital stories were shaped by the technologies and modes that made up each text.

Preservice teachers and their students were free to choose which digital tools to use in the creation of their collaborative digital stories grounded within the literature (Lambert, 2010) that we studied in the course. Twelve of the 19 digital stories analyzed were created with slide presentation software (PowerPoint, Keynote, Google Slides), with these technologies used in a variety of ways. The digital stories created with slideshow software ranged from using images and written words as the two main modes to those that included embedded audio and video clips, background music, and avatars created with the iPhone Animoji feature as described above. Two of the digital stories created with presentation software had recorded narration and were set to run automatically, which when presented more closely mirrored the six that were created with video editing software (iMovie, Powtoon).

The use of written and spoken language varied throughout each story. While each story had some writing, the nature of the writing ranged from titles and phrases to paragraphs describing the work and the learning. The frames that were text heavy often closely mirrored the type of academic language that preservice teachers were required to use in the formal written lesson plans that they submit both for the course described in this inquiry and throughout the program in preparation for the standardized state performance assessment that they all must pass to obtain certification. Here the analysis showed that allowing preservice teachers to draw on the affordances of digital technology for storytelling in this teacher education course was not sufficient to shift the prevalent discourse of academic language for some in this project. In other words, providing preservice teachers with the opportunity to document learning through digital media collaboratively with their elementary students was not always sufficient for new identities and stories to materialize.

Analyzing the digital stories alongside preservice teachers' reflections revealed how their comfort level and the comfort level of their student to be audio or video recorded impacted the choice of modes in the creation of the story. For example, one preservice teacher wrote in her reflection, "I did ask my student if she would help me complete the digital story, but she told me that she's shy. As of now, I only have some writing that she has done in our lessons" (Ms. Karen teaching reflection). Ms. Karen and her student's digital story did not include any audio or video and had just one selfie of the two of them (which Ms. Karen explained she was very excited

that her student decided to include). The pair, instead, included images drawn and written on colored construction paper showing their shared learning. One image was a chart created by the student with illustrations of objects reflecting all of the letter sounds she had learned.

Another preservice teacher whose student did not want to be audio or video recorded had a montage of pictures of the student working on different projects, with a music soundtrack playing in the background throughout the story. These two examples show how the ability to choose different modes to present learning allowed for students who were not comfortable sharing verbally to portray their own learning in meaningful ways.

Further, preservice teachers described how their own history with digital technologies shaped the digital stories they produced. For some, the challenges of digital media significantly impacted their final product. One preservice teacher reflected,

> I have spent ALL NIGHT trying to import various videos and voice recordings of my student that would have significantly benefited this digital story. I have so much valuable digital material that has been rendered useless due to the evils of technological incompatibility. Unfortunately, every desperate attempt had failed. (Ms. Alesha's teaching reflection)

It is important to note here that although the videos and voice recordings were not a part of Ms. Alesha's final digital story, these artifacts were created, and the learning that emerged through their creation was clearly reflected upon despite their absence from the final product presented.

Discussion

This discussion of the research findings begins with an acknowledgement that a limitation of this work was that preservice teachers were composing their digital stories for a required course in which they received a grade. With that being said, preservice teachers described the ability to use digital technologies, including images, music, and video, as helping them to gain a greater understanding of their students' cultural and linguistic assets that were useful in designing instructional experiences. I emphasize that I am not advocating that formal lesson planning and teaching reflections using academic writing be replaced by digital storytelling projects such as those described in this article. Instead, I offer that providing preservice teachers with a wide range of opportunities to design texts that showcase their learning can support preservice teachers' practice.

In fact, what became clear throughout this research was that providing opportunities for preservice teachers to use multiple modes in describing their learning and the learning of their student strengthened their ability to do so in academic writing. This aspect was particularly meaningful for one preservice teacher in the course for whom English was not a first language, which she shared in her teaching reflection. In this way, incorporating digital storytelling projects could help to diversify the teaching workforce by honoring different ways of representation beyond

traditional academic writing that privileges White middle class ways of knowing (Heath, 1983; Lareau, 2003).

However, as discussed in the findings, providing opportunities for preservice teachers to collaborate with students to create digital stories was not always sufficient for new ways of thinking about teaching and learning in the literacy classroom that honored students' cultural backgrounds and experiences to materialize. Instead, some of the digital stories in this research closely mirrored the academic discourse of learning in teacher education. Given the concern that a student raised about the class being weird, it is not surprising that preservice teachers felt most comfortable designing within the familiar discourse of the academy.

One way to address this discomfort might be for teacher educators to focus more on the process of creating the digital stories, as opposed to looking only at the final product, as was the case in this research. While I intentionally chose not to create a rubric and assign a grade or score to the finally presented digital stories in hopes that it would free students from feeling as if they had to work within an academic discourse, the finding that many students worked within this traditional academic discourse could have been due to the fact that students were required to share their finally produced story on the last day of class. A broader conversation within schools of education about how to incorporate opportunities for preservice teachers to represent their own and their students' learning in different ways could increase preservice teachers' comfort level with designing different types of texts in their teacher education classrooms.

Another important implication of this research is recognizing that the affordances of digital media were at times unavailable for preservice teachers who experienced difficulty with using the technology. In this research, preservice teachers used their own devices but also had access to a school computer lab and computer technician. Despite these resources, preservice teachers still experienced challenges in embedding media and rendering video. Thus, it is important to recognize and respond to the need for access to tools such as reliable high-speed Internet connections, computer devices with adequate processor speed and storage space, and technology support for students to ensure that they are successful in designing collaborative stories through digital media. It also highlights the need to think beyond final products to a view that honors and documents the learning that takes place through the creation of the digital stories.

Finally, some questions for future research to support the incorporation of digital storytelling into preservice teacher education should include the following: How do teacher educators assess learning in a digital story when the predominance of our assessment tools are print based? Further, how might collaborative digital storytelling be integrated into lesson planning, as opposed to it being a separate project, as was the case in this research? Engaging in research around these topics can help further discover the possibilities of incorporating collaborative digital storytelling into literacy classrooms.

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