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Casting New Light on Adolescent Literacies: Designing Digital Storytelling for Social Justice With Preservice Teachers in an English Language Arts Education Program

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This manuscript describes an inquiry into preservice teachers' (PSTs) experiences composing a digital story around the concept of adolescent literacy as part of an English language arts methods course built on critical literacy and critical inquiry traditions. Part of the assignment was to examine adolescent literacy "in these times," paying attention to the literacy lives of current adolescents. This inquiry used qualitative methods to gain insight into the ways digital storytelling about literacy might support PSTs to forge new connections with youth. The article reports three key findings about the role and value of including digital storytelling as a required part of an educator preparation program.

The profession of teaching has consistently evolved and adapted with new pedagogical frameworks, new research, and of course, new technologies. Little question remains that technology informs the ways teaching and learning settings are designed and information is shared between and among teachers and students.

With the proliferation of new forms of digital media and technological tools, teacher educators continue to seek new ways to teach their university students how to leverage digital media for K-12 student learning. In today's digital landscape, with a growing number of accessible, low-cost recording tools and storytelling platforms, we (an English language arts teacher educator and counseling graduate student) approach this work with the belief that teacher educators have a responsibility (a) to ask teacher candidates to consider how digital media will interact with their teaching practices and (b) to prepare teacher candidates to use some technological tools and digital media in their pedagogical designs (Hutchinson & Colwell, 2014; Leu, Kinzer, Coiro, & Cammack, 2004).

Given the increasing prominence of digital media and new technologies, institutions of higher education are expected to integrate digital competencies into their educator preparation programs (EPP) in order to increase teachers' capacities for incorporating technology into K-12 classrooms. EPPs are accountable to the International Society of Technology in Education (ISTE; Office of Educational Technology, 2017) standards as well as technology-focused standards in the content-areas.

According to the National Council of Teachers of English (NCTE) and International Reading Association standards for ELA (2012), students should "Use a variety of technological and information resources to gather and synthesize information and create and communicate knowledge." Although technology often promises enticing new ways to learn and discuss topics and engage with course content, the central focus of integration must be to leverage students' existing literacies, foster new digital literacies, and facilitate interactions that build students' participatory literacies (Wohlwend, 2016) in the process of participating with the academic content and intellectual work of a course.

Growing numbers of teacher educators are attending to digital technologies and digital literacies in various content areas, including English language arts. Teacher educators are incorporating a range and combination of audio essays, Twitter chats, podcasts, songs, digital stories, and more into the learning opportunities in their EPP classrooms. They increasingly emphasize the requirement to integrate technology within and across all teacher education courses, regardless of content, yet less attention is being paid to the capacity of technology to facilitate critical literacy and social justice work within the context of teacher education courses. Our focus in the study described here was to understand digital storytelling as a form of critical literacy and critical inquiry in an ELA education classroom and, relatedly, to understand how this kind of digital inquiry and composition informs preservice teachers' (PSTs) understandings of literacy and technology.

This article offers digital storytelling (DST) as one way for teacher educators to create opportunities for PSTs to develop their digital competencies and imagine one way to integrate technology into their future classrooms. Although learning the tools and technologies associated with DST are part of the project, the DST is primarily a place for PSTs to examine their literacy histories alongside current adolescents' literacy lives.

This work built on existing research that documents how DST, as an assignment for PSTs, offers them the opportunity to participate in first-hand experiences using new technologies they may wish to incorporate in their classroom one day. DST has the potential to offer a gateway to make learning both creative and engaging, while contributing to the development of students' reading, writing, listening, and

speaking skills (Anilan, Berber, & Anilan, 2018). Although digital storytelling has a range of uses, for the purposes of PSTs and literacy studies, it has been documented to be a useful and effective tool for comprehension and retention efforts (Anilan et al., 2018; Turgut & Kisla, 2015). For the project at the center of this inquiry, the DST assignment was designed to teach digital technology skills in the service of deepening PSTs' understanding of adolescents' literacies and youth culture, both of which are critical to the PSTs' success as future ELA teachers of adolescents.

Framework

Pedagogically, this work was grounded in a conceptual framework around critical inquiry-based pedagogy and sociocultural constructions of literacy. Both traditions support what Cochran-Smith (2005) called "teacher education for social change." Critical inquiry-based pedagogies are intentionally designed to create room for students and teachers to take responsibility for the learning that takes place (Christenson, 2009; Fecho, 2004).

This framework aims to surface and, in turn, leverage the diversity of perspectives between and among the participants and instructor in a classroom. To support this stance, Mary Frances (Molly) designed her ELA methods course as an inquiry. Thus, Molly aimed to design activities that allowed PSTs to share their reflections on literacy in these times and then situate and interpret those individual and personal observations within broader social contexts (city, state, and nation). This framework assumes that theorizing occurs within practice.

A critical part of this DST assignment was to learn with and from PSTs' experiences working with different adolescents in different field placements. It is a place where PSTs were invited to "read" their adolescents and to read the texts and contexts available for literacy teaching and learning. PSTs were asked to interrogate their beliefs and assumptions about literacy as well as the beliefs and assumptions adolescents may have about literacy.

Drawing on sociocultural constructions of literacy, this inquiry and the DST assignment at the center of this inquiry, were based on the recognition of literacy as a set of social and cultural resources that are situated, multiple, and interactive (Barton & Hamilton, 2000; Street, 1984). In keeping with the perspective of literacy as a critical, social, and cultural practice, PSTs' literacies and the range of texts they read are uniquely constructed and shaped by their situated contexts and always actively negotiated by individuals.

Digital literacies represent many of the ways that instructors and students, alike, across generations, generate meaning. We approach our work with the belief that PSTs must develop digital competencies prior to their program completion in order to be well-prepared when assuming their roles as new teachers. Situated in the context of an ELA EPP, the learning and evolution of PSTs' digital literacies should be conducted in tandem with learning about critical literacy pedagogies, especially young people's literacies.

In additional to the pedagogical framework for this inquiry, this study was designed around three interrelated bodies of work: (a) critical literacies, (b) multimodality, and (c) youth studies. A critical literacies perspective supported this work because critical literacies emphasize *who* tells stories, *how* they are told,

and the purposes for which they are told. According to Janks (2013), critical literacy pedagogies encourage people to examine the texts they encounter. In addition to supporting critical examination of texts, critical media literacies encourage the creation of alternate representations of stories, people, and texts and multiple formats in an effort to be an agent of change.

Critical media literacies (CML) pedagogies build on and extend the work of critical literacies and media literacies. Kellner and Share (2007) suggested that a CML pedagogy "expands the notion of literacy to include different forms of mass communication, popular culture, and new technologies" (p. 60; see also Goering & Thomas, 2018; O'Byrne, 2019). Drawing on CML in the context of an ELA teacher education program deepens the potential of ELA education by including acritical analysis of relationships, position, race, class, information, and power.

This work also drew on the concept of listening as critical practice and, specifically, the concept of "playback" as a way to engage with texts, bodies, and perspectives in new ways (Buckley-Marudas & Doerr-Stevens, 2019). Finally, critical literacy traditions supported our efforts to see this opportunity to leverage digital media not as an end in itself but rather as an important way to invite PSTs into critical dialogue with their own literacy histories as well as their beliefs and assumptions of the literacy learners and literacy lives of young people today.

To support young writers in this digital era, ELA educators are called to teach students to compose texts with a range of modalities, including alphabetic print, image, and sound. Multimodal composing has been documented to promote engagement (Albers, 2006; Albers & Harste, 2007) as well as critical inquiry (Spire, Hervey, Morris, & Stelpflug, 2012; Whitelaw, 2017). Kress (2010) defined a mode as "a socially and culturally shaped resource for making meaning" (p. 79).

Multimodal frameworks supported this work, as video, audio, and sound elements of the stories are each unique modes of communication. Multimodal learning is learning that relies on or requires more than one sign system (e.g., print, sound, image, and gesture) to create meaning. Multimodal approaches include the ways individuals interpret physical and virtual worlds, the relationships between people, and how people experience certain spaces (as in Jewitt, 2014).

We also drew on Soep and Chavez's (2010) view of youth media practices as a form of "converged literacy" (p. 21) to support how we think about the ways that various components of content analysis, production, and distribution come together. For Soep and Chavez, making media requires a sophisticated understanding of the message in a given context, as well as the audiences and afterlife of the media content. In the ELA, multimodality has become recognized as a critical component of the secondary curriculum (Morrell & Scherzo, 2015). DST is a multimodal literacy that is a complex representation of ideas in-the-making and creates opportunities for students to come to new understandings of the content in question.

Youth culture supports our effort to position adolescents as thoughtful agents in their own lives as well as their relationships with others and their surrounding communities. In contrast to the ways adolescents are often positioned in society, including the "not-yet adult" construction of young people (Alvermann, 2006), we believe that youth are always navigating complex social worlds. Work on youth often posits that adolescence, drawing on biological and psychological maturation processes, can be conceived of as a universal phenomenon or a biologically

determined stage of development aligned with certain kinds of behaviors (Hall, 1908).

In contrast, we adopted the premise in this study that youth is a socially constructed category (as did Buckingham, 2003, 2007; Kett, 1977; Levi & Schmitt, 1997). Instead of seeing adolescents as "incomplete" cultural actors on their way to adulthood (Kett, 1977), we accept that adolescence is a social category informed by various forces (e.g., political, economic, and cultural) and social actors (e.g., peers, adults, schools). Extending the youth culture framework, our inquiry drew on the youth lends shared by Petrone, Sarigianides, and Lewis (2014), which emphasized the need to resist deficit views of young people and conceptualize them as complex individuals.

Background and Relevant Literature

Digital Technologies in the Classroom

Researchers and educational practitioners have agreed that technology can be harnessed as a pedagogical tool to both assist and expand student learning capabilities (Smith, 2017; Vu, Warschauer, & Yim, 2019). Researchers have well documented that incorporating technology into educational instruction can offer many advantages to the processes of teaching and learning. Existing research suggests that teachers should teach students how to use different digital tools and help them develop multiple literacies (Leu, O'Byrne, Zawlinkski, McVerry, & Everett-Cacopardo, 2009).

Several studies have documented the ways in which digital media and networked technologies are able to create new kinds of spaces for literacy learning and new opportunities for interacting with others in formal school-based settings (Buckley-Marudas, 2016; Hull & Stornaiuolo, 2014; Ito, 2013; Mills, Ulsworth, Exley, 2018; Shanahan, 2012).

In the case of school-based instruction, many argue that technology must be used specifically to improve the teaching of students in ways that might not have happened had technology not been used (Earle, 2002; Heo, 2009). Thus, individuals who are preparing to become teachers must be taught how to leverage their knowledge of educational technology from their EPP in the context of K-12 classrooms (Alcantud-Diaz, 2016).

A criticism of many PSTs is their programs' failure to incorporate familiar technology into their studies (Starcic, Cotic, Solomonides, & Volk, 2016). According to Hutchinson and Colwell (2014), much of the existing research on technology in the classroom is focused on the specific, technical integration of technology in the classroom, with little emphasis on course content or students' literacies *in relation* to the technologies. Furthermore, little has been reported on how EPPs are preparing teachers to support their future students to adopt digital tools in more critical ways.

Using technologies that PSTs are familiar with holds the potential to increase their digital competencies, yet familiarity alone does not translate to pedagogical use and design with technology. According to Beach (2012), teachers often find that they are left to learn digital literacies on their own time and through their own

initiative. Moreover, they are left to figure out how to use and leverage digital literacies in their instruction.

While the technology being used may be somewhat familiar, its use as a pedagogical tool is characteristically different than personal use. Using technology resourcefully throughout the teaching processes allows PSTs to use their personal technologies for a continuous transition into the classroom (Heo, 2009).

DST is typically understood as a form of multimodal composition which includes some combination of semiotic modes into both the writing processes and final products (Kress, 2003). Examples of semiotic modes include text, speech, visuals, and sound. DST has garnered much attention in education because of the way in which writers are able to make and share meaning with multiple modes and across different digital platforms (Dobson & Willinsky, 2009). Depending on the purpose and context, digital stories can be introduced for different instructional purposes and achieve a variety of learning goals.

Existing literature about DST documents its use as a way to increase the writer's ability to compose with multimodal technologies. In other cases, it is introduced as a powerful way to build skills and confidence when learning and practicing a new language.

DST and Teacher Education

Within the existing literature on DST, several ideas are identified concerning PSTs' experiences with DST as a teacher education assignment. In some works the authors posit that asking PSTs to engage in DST helps increase their confidence in incorporating technology into the classroom effectively. Ng and Nicholas (2015) said that most of the PSTs in their study reported a positive experience producing a digital story, with PSTs describing the experience as relevant and motivating.

Tiba, Condy, Chigona, and Tunjera (2015) reported that digital stories can be used as an engaging learning activity for students, but that many PSTs enrolled in an educator preparation program lacked the self-confidence to use DST as a pedagogic tool. Their work documented that PSTs who had completed a DST assignment believed that their project prepared them to teach with DST in the future.

While increasing PSTs' general confidence and self-efficacy in incorporating technology in the classroom in general is helpful, Heo (2009) argued that after engaging in their DST assignment many students experienced more openness to using the technologies in the future. While some technologies and software programs involved in the digital story making process may take longer to master than others, current research shows that PSTs were able to create a semiprofessional-quality digital story to share with their peers.

Heo (2009) surveyed 98 undergraduate PSTs concerning their self-efficacy and confidence in using and incorporating educational technologies. Pre and postexperimental surveys indicated that PSTs' confidence increased as a result of the class assignment. Many PSTs also expressed their approval of a DST assignment, as it incorporated benefits including the ability to create a unique story while being offered the freedom to exercise their own creative and

imaginative skills (see also Anilan et al., 2018; Yilmaz & Durak, 2018). This work shares the promise of using digital stories for the purpose of developing teachers' digital literacies and engaging in meaningful content that enhances teacher and student learning.

Some of the disadvantages that have been documented with DST include its difficulty to be used in content-laden subjects. It may become difficult for students to understand or maintain their level of interest in the subject if the material is incomprehensible (Anilan et al., 2018). Stories that included too many imaginary, or unreal, characters lost the true meaning of what the digital story intended to cover. Students easily became caught up in the story rather than the topic or lesson. The authors noted that lesson planning that includes DST should be treated with caution in relationship to story technique. Storytelling technology should be used without straying from the core subject or content of discussion.

Digital Storytelling and English Language Learning

Within the literature on DST is a fairly large subset of work that focuses on DST with students who are English learners (ELs) and with current and future teachers of ELs. Much of this research has shown that incorporating technology into the classroom to assist learning can be particularly beneficial with ELs.

DST has been documented to have positive implications on English language development. Specifically, the research shows digital storytelling has altered the way teachers are able to teach and incorporate new learning strategies. The technological advantage of the assignment is that it is able to enhance Els' ability to increase their language production and complexity skills (Golonka et al., 2014). As listeners, the audio component of DST allows for individuals to hear language-in-use with accompanying visuals and images. As creators, the digital story allows for ELs to practice using the language and hearing themselves use the language, again in the process of creating and sharing a story they have authored.

Research Purpose

This article builds on the existing literature that documents some of the benefits and drawbacks of including DST as an assignment for PSTs. Our interests, however, lie specifically in how inviting ELA PSTs to compose with digital technologies might enhance their understanding of today's adolescents, encourage PSTs to use technology to expand literacy learning, and to think about how digital media supports a commitment to social justice in the classroom. Although some studies have documented the connection between digital media and digital literacies and social justice, little research has documented how DST can be used to support, nearly simultaneously, teacher candidates' understandings of adolescent literacies and ELA education as social justice work.

Considering the rise in low-cost composing and publishing tools, the surge in DST production and consumption, and the recently revised NCTE EPP standards, 2018 was the year when Molly decided to look more carefully at the potential of digital storytelling in her ELA education course. She was specifically interested in how the creation of a specific digital storytelling assignment might be a compelling way to meet the new NCTE standard for social justice. Thus, Molly designed an assignment that would require PSTs to compose a digital story as part of a

Secondary English Language Arts methods course built on critical literacy and critical inquiry traditions.

The digital story would ask PSTs to engage and interrogate the concept of adolescent literacy. An explicit part of the assignment, drawing on interview data with a current adolescent, was to examine adolescent literacy "in these times." To facilitate this intellectual work, PSTs wrote a literacy autobiography and interviewed adolescents before composing their digital story. This process of combining ideas from a teacher candidate's autobiography and a current adolescents' biography in one digital production has implications for deepening the PSTs' critical literacies and leveraging digital media in classrooms and schools that are often limited by test-driven pedagogies.

PSTs' digital story autobiographies were a critical literacy practice because of the ways in which PSTs were asked to inquire into their own and each other's, including the adolescents', assumptions about literacy. The requirement to interview one or more adolescents was included to ensure that PSTs spent a sustained segment of time interacting with an adolescent and hearing directly from the adolescent about their literacy life.

The primary aim of this work was to determine *how* digital storytelling in the context of an ELA teacher education course might benefit and support teaching and learning related to adolescent literacy in ELA adolescent young adult (AYA) classrooms. Specifically, we aimed to gain insight into the ways that DST about literacy might support PSTs in forging new connections with youth. Attention would be paid to the extent to which this pedagogical approach served to deepen (or not) PSTs' empathy for adolescents as they navigated a time rife with fears surrounding issues including race, police brutality, religion, gun violence, and deportation.

At its core, this assignment is rooted in an understanding of education as social justice. To understand the role and potential value of PSTs' DST experiences, we asked the following two research questions:

1. What are the experiences and opinions of PSTs who composed a digital story as part of their ELA educator preparation program?
2. Based on PSTs' experiences, what are the implications for DST in ELA education programs?

Increasingly evidence indicates that DST enhances students' learning capabilities. With this work we aimed both to build on and expand the existing body of research by examining the ways in which the explicit use of DST with PSTs in an English education course can inform teachers' knowledge of digital literacies, increase their confidence with some technological tools, and, most importantly, deepen their understanding of adolescents' literacies. By asking PSTs to engage in the production and publication of a digital story about their own literacy autobiography and at least one adolescent's literacy biography that PSTs, we expected they would be able to gain nuanced insight on adolescents' everyday lives.

Methodology

Research Focus

DST, as it was conceptualized and introduced in the class at the center of this inquiry, would require all PSTs to draw on and integrate technology in the process of completing this methods course. The assignment aimed to enhance PSTs' constructions of literacy, deepen their knowledge of the literacies of the adolescents they taught, and support NCTE's standard for ELA education for social justice.

After PSTs' digital stories were completed, they published them to their peers in the class for feedback and completed a reflective writer's memo. PSTs were accustomed to completing a writer's memo after every assignment in the course. This memo would offer PSTs' insights about their experiences completing the assignment and the implications they saw for their own future teaching.

Mode of Inquiry

The aim of this inquiry was to analyze the experiences and opinions of the PTSs regarding the use of DST in a university classroom within an ELA EPP. This qualitative study used critical case study methodologies (Yin, 2002) and practitioner inquiry (Cochran-Smith & Lytle, 2009) traditions. We drew on qualitative methods to analyze data from different sources in order to understand the range and variation of ways PSTs took up and made sense of the invitation to compose and publish a digital story related to the concept of literacy. Working within a higher education institution, we obtained permission from our institution to conduct the study, as well as permission from the students who participated in the study.

Participants

All participant data was collected from the PSTs enrolled in a required course in the AYA English Education licensure program. Data were collected during the fall 2018 semester and spring 2019 semester. Interviews were not conducted until the course was complete and students' grades were submitted.

All PSTs enrolled in the class were earning their licensure in ELA education. Two students were graduate level students, one was a postbaccalaureate student, and the remainder were undergraduates earning their degree in English. All PSTs enrolled in the class were required to engage with a DST assignment titled Inquiry Into Literacy Autobiography and Biography.

To complete the assignment at a satisfactory level, PSTs were expected to compose, submit, and share their work in a digital-story format. In addition to sharing their work from the course, PSTs would be asked to share their experiences with Marranda in an interview. Participation in this study was completely voluntary and not evaluative. The class included 12 students. A focal group of four students participated in the 1-1 interviews. The focal group consisted of all students who agreed to participated in the interview. After the assignment was completed, Molly collected reflective comments from all enrolled students regarding their experiences and opinions of the digital storytelling process.

Data Collection and Analysis

Over the course of an academic year, the following data sources were collected: PSTs' written reflections, PSTs' final digital stories, and transcripts of interviews with select PSTs. After publishing and presenting their digital story for class credit, four PSTs were interviewed about their experiences with DST. Using a semistructured interview protocol, the PSTs were asked to describe their previous experiences with DST as well as their comfort level incorporating technology in the classroom. They were also asked to rate their experience and describe any challenges they may have faced throughout the process.

To support our interest in understanding the pedagogical value of DST for PSTs' future instructional design, we also asked PSTs questions about what steps they might take to incorporate DST in their classrooms and what they saw as the implications of DST on ELA education.

Data analysis was ongoing and recursive. We inductively generated codes (Saldana, 2015; Strauss & Corbin, 1998) and used new information to deepen our understandings. The entire collection of interview transcripts and reflective memos were included in our analysis.

Data analysis included three rounds of coding. The first round of coding was focused on trying to understand, broadly, students' impressions and observations about the experience as it related to the experience on the whole. During this round of coding, we made note of specific kinds of characteristics (e.g., fun, challenging, interesting, and exciting) as well as any positive and negative associations with the experience. The second round of coding aimed to narrow in on PSTs' experiences with some of the more technical elements of digital technologies, aiming to gain insight on what value this experience might have for future teachers' use of technology in their instructional design. The third round of coding zoomed out to focus more heavily on instances in which we saw reference to or examples of what PSTs seemed to learn in and through the process of engaging in this project. After the three rounds of coding, we paid attention to patterns and emergent themes and began to group the data into the different themes.

Findings

Based on a close examination of PSTs' written reflections, interviewees' interview transcripts, and interviewees' digital stories, we found that asking PSTs to engage with DST and produce this kind of literacy narrative as part of their teacher preparation program contributed to three key findings. The findings are organized by three themes that emerged from the data analysis. The first finding largely addressed the first research question. The second theme addressed aspects of the first research question as well as the second research question. Finally, the third finding primarily addressed the second research question.

The three themes are as follows:

- "Better than writing a paper."
- "Figure it out."
- "Open up."

The first finding, "better than writing a paper," captures the range of ways that PSTs came to identify the unique capabilities of this mode and this platform, as well as the ways this mode created a different kind of learning experience than a more traditional print-based paper. The second finding, "figure it out," refers to the ways in which this assignment encouraged and fostered an important pedagogical stance of flexibility toward technology use. The third and final finding, "open up," reflects how this use of technology created important opportunities for PSTs to experience, first-hand, the potential of digital media and instructional technologies to build and foster relationships with young people in ways that simultaneously enhance their instruction. The following sections will elaborate on the three key findings.

"It was better than writing a paper. I've written too many papers" (Rahim, personal interview). In working to understand PSTs' experiences of engaging in writing and publishing a digital story, we found that PSTs gained important first-hand experience of a communication platform that could be used to share their ideas, stories, and experiences.

Although a digital story may not always be "better" than writing a paper in order to achieve the instructional goals, Rahim's (all names are pseudonyms) comment is significant in that it shows he recognized the existence of other valid and compelling ways to share and publish one's work. Rahim's comment highlights the important observation that DST can create space for different kinds of stories.

In the spirit of understanding this classroom and this assignment as part of the commitment to critical literacy and social justice, the act of opening a different platform, invited, promoted, and honored alternative ways of telling. This alternative way of completing an assignment did not necessarily take less time or come to students easily. Several students indicated that a paper or an electronic slideshow presentation would have been much easier.

Yet, by virtue of being different than a typical paper or other summative assessment in school, Rahim's experience illustrated that he found a kind of freedom and flexibility with the digital story that he did not feel with written papers. This finding supports the idea that written papers do not require students to think multimodally and semiotically about different ways to best represent their ideas, to format material and use different texts strategically to communicate their ideas and engage a variety of diverse audiences (Doerr-Stevens & Buckley-Marudas, 2019; Smith, 2018).

This point is important in terms of supporting and extending the PSTs' own learning and offering PSTs a range of ways to represent and present their learnings and for urging PSTs to offer their future students a range of different formats, modes, and platforms to share their work and represent their thinking and learning. This finding both confirms and extends Ellison and Solomon's (2019) finding that digital storytelling is "a perfect opportunity that students need in order to create their own stories fully across modalities and tell you who they are (and who they really are will defy most assumptions" (para. 8)

Ellison and Solomon's (2019) work was focused on African American children and families. Yet, their argument that all children need space and time to tell their own stories, including digital stories, resonates with our finding that digital stories are a powerful literacy space for PSTs to learn about themselves and to learn about and with young people.

Extending the idea that engaging in this experience supports PSTs' pedagogical use of technology in these times, Jessica said in her interview that after completing this assignment she had new beliefs about how the digital story could be used as "a good way to kind of transfer into other parts of [student] literacy." She commented that digital stories could be "an assignment than can replace the stereotypical book report" (Jessica, personal interview).

In the process of completing her own digital story, she came to recognize another way she could ask her future students to share what they knew. Furthermore, this result emphasized the idea that multiple ways are available for students to engage with texts. Jessica mentioned the digital story as a way to engage with texts, but we would add that the share-ability of a digital story implies that it is also a way to engage with others around and about texts. This strategy supports much of the work of teacher education courses, in that the act and process of engaging PSTs in a process or method increases the likelihood of PSTs using the approaches in their own future teaching.

This assignment was deliberately not solely about learning a discrete technological tool or method, but rather about leveraging a technological tool and platform in the process of asking PSTs to think about their literacy histories and adolescents' current literacy lives. The PSTs were charged with finding a way to write, narrate, and produce an audio-visual rendering of how they interpreted and understood literacy. This finding supports calls to integrate technology within and across content areas and disciplines and not as isolated curricular content or material. Furthermore, this finding supports initiatives to ensure that technology is not positioned solely outside or external to content areas but rather woven across all content areas within any licensure program.

In both interview transcripts and written memos, PSTs pointed out that this DST project helped to extend their vision of what counts as assessment and, relatedly, what final projects might look like in a classroom. This assignment, thus, shows potential to change some of the taken-for-granted ways of assignment and evaluating student work. Relatedly, it shifts the very concept of audience and who students (PSTs as well as K-12 students) see as the audience for their work. Instead of maintaining the idea that students write for the teacher, this digital story was shared with classmates, but many PSTs were eager to share the final product with their adolescent interviewees.

Tied directly to what PSTs were learning about adolescents' literacy lives in school and out of school and witnessing their own engagement with the digital story creation, PSTs began to see how this format facilitated different kinds of learning and different kinds of human interaction and connection. This finding suggests that digital stories could help to build participatory literacies.

Most notably, using digital media to tell a highly personalized literacy narrative showcased ways technology could be used to increase human connection and understanding. This project was designed as an inquiry into adolescent literacy, but PSTs saw the potential to use the format for other kinds of engagements with texts and lessons. Jessica saw that this format could be useful for asking students to engage with texts and inquire into books in a different format than a typical book report.

Rahim explained that it also expanded his repertoire for how to use technology "in creative ways. Having them synthesize material they learn. Maybe instead of

having them write a final paper for one of the quarters, they could do, like, a capstone digital story" (personal interview).

Building on the notion of "creative," Nancy shared in her reflective memo that she liked that the digital story offered, "a different way of sharing information, rather than a PowerPoint or essay format. A more creative outlet (even though I'm not a creative person). It would work well for the student I interviewed" (writer's memo). This first finding captures how, in addition to the enhancement of PSTs' own digital literacies, they were developing a more nuanced portrait of adolescents as people that was contributing to their developing ideas about more engaging projects and assessments in the classroom.

This finding is resonant with Jasmine's feeling motivated and engaged by the freedom the digital storytelling format offered her. She wrote, "I liked that I could take the digital story in my own direction. I liked that I could add my personal touches and my own narrative" (writer's memo). It was clear that the chance to use audio and video and to have so much agency over how the story was woven together was motivating for many PSTs.

"Figure it out." Data analysis revealed that this project enhanced participating PSTs' own digital literacies. This finding offers new insight into the experiences and opinions of PSTs who compose a digital story as part of their ELA EPP, as well as PSTs ideas about the possible implications of this DST assignment for ELA. Although PSTs entered the class with different skill and comfort levels in relation to using technology, particularly as an instructional tool, PSTs reported that they became more confident users of some aspect of technology through the process of this assignment.

Within the small group of PSTs who were interviewed, Ashley reported she had no prior experience with digital stories and was not very comfortable with technology in general or in the classroom. A second PST, Jasmine, was very comfortable with technology, in general, and technology in the classroom. She had no prior experience with DST, but believed she could figure it out. As she said, "You can Google anything." Jessica said,

> I didn't have any experience with creating a digital story, and I didn't even know what one was. Honestly, the closest thing to a digital story board was probably like making a PowerPoint. But this was more complicated than a PowerPoint.

She also said, "Even though I'm a younger person and I should be good with technology, it's still hard for me to, you know, learn the new things." The last interviewee had some experience with making an instructional video and felt fairly confident with technology.

We found evidence that this project helped some PSTs develop what we would describe as a flexible stance toward using technology pedagogically. With awareness of the proliferation of new technology tools, we were less concerned that PSTs master one specific tool or platform and more concerned that they develop a willingness and the confidence to try something new or uncomfortable.

A phrase that appeared several times across the data was, "figure it out." In every case, PSTs referred to the fact that they found a way to figure out how to use some technological aspect of the project or that they figured out how to use this particular technology to tell a literacy story that mattered to them. Regardless of students' self-identified comfort level or whether they had prior experience with creating a digital story, all students ran into some challenge along the way. Although various supports were offered along the way, including a workshop with the director of instructional technology, a peer-to-peer forum for sharing ideas, and a folder with online resources and storyboard templates, PSTs would inevitably face an obstacle. Moreover, PSTs had to figure out how they would tell the narrative behind the story.

PSTs struggled with some of the technical aspects of the project, but the project was still clearly perceived as fun and interesting. One PST wrote in her reflective memo on the day she submitted her digital story, "It was fun to make, despite the technical difficulties."

Nearly every student, whether they considered themselves a particularly proficient user of technology or a novice, noted that the project improved or enhanced their use of technology. For some, this was using iMovie for the first time or the significance of preproduction and storyboarding, and for others this was editing material and streamlining audio accessed from multiple sources. Examples of some of the challenges that PSTs identified as frustrating to them included getting the sound right, shooting scenes, not having enough video footage, and the large amount of time it took to take a 3-minute video.

This project created opportunities for PSTs both to learn about and gain experience with different tools to support their evolving digital literacy learning and future teaching. We have found that some of the educational technology courses that are typical to teacher licensure programs introduce PSTs to a range of educational technologies, but do not necessarily require students to work in depth with any one technology. They are left aware of different tools but less confident integrating them into their pedagogy. Such courses offer a brief overview or quick survey of many of the different alternative possibilities, but the class finished without working all the way through one project.

Although neither the focus of our inquiry nor the central goal of PSTs' digital stories was focused on the technical teaching of technology skills, data analysis revealed that the technical learning could not be overlooked. PSTs' capabilities with the technical elements could not be isolated from thinking about the value and meaning of this kind of project for PSTs.

We asked all interviewees to identify their level of experience and comfort with technology, in general, and technology in the classroom. Ashley said,

> I would say with both [technology and technology in the classroom], extremely uncomfortable. I have very little experience with technology. Even currently, as a student teacher working to become an aspiring educator, even at the school where I teach, we don't receive a lot of assistance with technology. Even my mentor teacher, a lot of what I'm incorporating is very new to her as well. So, it just seems that we don't use technology very much, because we don't know how (personal interview).

It became nearly impossible to consider how this digital literacy and pedagogical approach might deepen PSTs' empathy for adolescents without simultaneously considering how this approach informed PSTs' own digital literacy learning.

In examining the range and variation of technological challenges and struggles along the way, we came to new understandings about the value of an assignment that deliberately made room, as part of the project, for PSTs to tinker with new media tools in the process of completing the academic work of an ELA education course. In response to a question on the writer's memo that asked PSTs what challenges they faced in completing the project, one PST wrote, "My computer crashed once or twice." Despite this challenge, the PST reported that she liked the project and had fun.

As this digital story was a required assignment, students persevered and completed the work. It pushed PSTs to continue when they may have decided that it was not something for them or that it was too much work. Experiencing the range of feelings that come along with some of the things PSTs reported (including stories not being what they perceived as "perfect," software limitations, time constraints, and even computer crashes) was a valuable part of learning what it means to embrace technology in one's pedagogical stance and approach. As PSTs experienced first-hand, technology *will* fail at times, but glitches should be expected and not reasons to avoid technology use in the classroom.

Analysis of PSTs' reflective memos and interviews revealed that they were attentive to the realities of technology malfunctioning and that part of using technology is knowing that it might crash. PSTs had several thoughts on how to address these realities. According to one PST, this kind of assignment requires that you "build in time for troubleshooting." Jasmine said she recognized that such an assignment requires a lot of time and more time than she had expected or budgeted. In an interview, she said that she did not know "how long it takes to edit and put video together with audio and captioning. That really took a really long time."

For Jessica, the lack of time posed a significant challenge to her completing the project up to her expectations. She said,

> I actually really liked making the digital story and I thought it was really fun, but unfortunately, I didn't have that much time to do it. Because, you know, having a full course schedule of classes and working full time, it was just hard to make it. So I kind of wish I did have more time.... I had fun recording. The editing that was so hard because, like, I had to do it so many times" (personal interview).

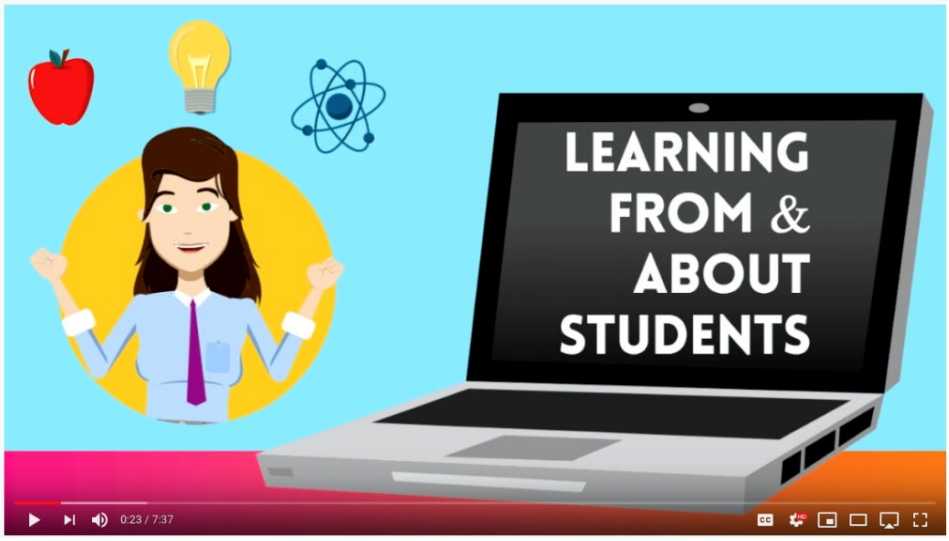
Nearly any profession that our graduates enter will require high levels of digital literacies. In addition to understanding how PSTs leverage what they learn through this assignment for using technology in their own pedagogies, we learned that PSTs saw that this assignment had benefits for their engagement with other professional commitments and certifications, such as the edTPA, a summative, subject-specific performance assessment for teacher candidates. At our institution, all students must complete the edTPA as one of their teacher licensure requirements. This assessment requires students to engage in different kinds of videotaping and video file compression and submission. In recent years, some PSTs have struggled with this assessment on a technical skill.

In her interview, Ashley mentioned the ways in which this project helped her prepare for the upcoming edTPA: "It made me more confident going into my edTPA" (personal interview). The requirements of this DST project, although seemingly disconnected from the edTPA, helped her prepare for the video components and camera work that are embedded in the successful completion of the edTPA.

It's a good opportunity for students to open up" (Ashley, personal interview). Finally, we found that in and through the process of engaging in this assignment, PSTs identified DST as a format and mode that allowed them *and* the young people whom they interviewed to express themselves and their ideas in new ways and via new communicative channels. According to Ashley, an undergraduate PST, "It's a good opportunity for students to open up in a way they felt they could not express before" (personal interview). Elaborating, she explained that DST could be particularly useful to use with students who are ELs. Analysis of Ashley's comments revealed that the DST assignment supported her to see how the decision to invite adolescent students into a different format and platform for composing a school-based assignment could honor a greater number of students' stories, especially students who may be newer to learning English and students who have difficulty writing a formal academic paper.

In and through her work with this platform, she noticed that new kinds of connections can be made with students and that the connection can be grounded in their humanity. Ashley opted for a cartoony style to her story. See Figure 1 for a screen shot from her final digital story.

Figure 1 Screenshot From Ashley's Digital Story



In addition to suggesting how the format could be useful for her students in a classroom setting, she also learned new information about her students, about who they were and how they navigated the world. In her memo, she said that she gained new insight on the literacy and learning life of her interviewee. She wrote, "The student I interviewed confirmed being unhappy and uninterested in their

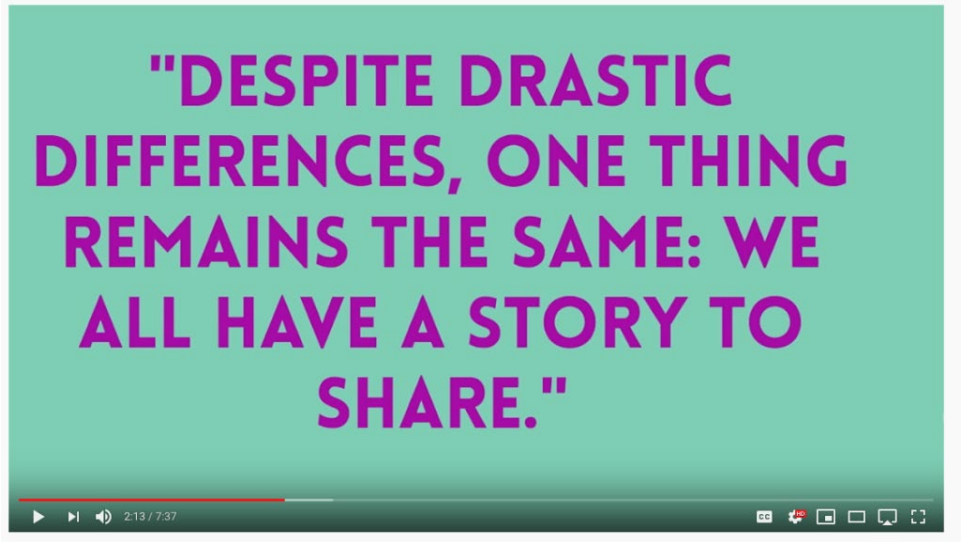
coursework. However, I was surprised by their personal engagement with literature."

This finding works to build a classroom working for equity in that this interaction and video project created space for her to surface and examine some of the assumptions she had about disengagement. PSTs often interpret a student's lack of interest or engagement during ELA class as carrying over to other aspects of the student's literacy life. Yet, this PST came to learn that the student was, in fact, engaged with literature and interested in reading in other contexts. Educators need to surface and disrupt some of the ways we characterize or categorize youth.

This finding builds on the work of culturally sustaining pedagogies (Paris, 2012), in that students are asked to bring their stories to the camera, and the stories are viewed as valuable and important. We found this digital storytelling assignment to be beneficial to all PSTs, not only PSTs who were working with ELs or students who had other identified needs that leave them well-suited to an audio and visual composition. Rather, as evident in several PSTs' reflective comments, this DST platform allowed them, as young adults and PSTs, to write their way into telling stories differently.

The platform forced PSTs to tend to and use a range of semiotic modes that may not have been natural to all of them, but are essential to living and learning in today's digital landscape. Figure 2 offers another screenshot of a moment in Ashley's digital story when she conveyed the universality of having stories and the diversity of stories. This screenshot illustrates the use of block text and a print-only screen in the middle of her story. This screen was used to isolate and highlight a key idea in her story that she did not want to get lost.

Figure 2 Screenshot From Ashley's Digital Story



Rahim said that one of the best parts of the project was the following: "It was really cool to interview the student that I interviewed for it. She also enjoyed that it was long. We had a forty-minute conversation, so it was a good way to get to know her" (personal interview). Several other PSTs paid attention to the ways this project

allowed them new insight on the specific adolescent(s) they interviewed and adolescent literacy, more generally. Many mentioned how much they enjoyed the 1-1 conversations with the students.

We found extensive evidence of PSTs talking about how this project deepened their understanding of adolescents that will expand their work in the classroom. Counter to the idea that technology might disconnect people, the phases here helped to leverage technology for connection. For example, Rahim wrote on his memo, "I learned that the student I interviewed values literacy and thinks that developing literacy skills will benefit her in the future. I also learned that the adolescent I interviewed would prefer more discussion-based lessons in the classroom."

Another PST wrote about being surprised how much confidence the interviewees had. Peter wrote that he came to learn through the adolescent that "reading and writing are not enjoyable tasks in school … and that the opportunity to read for pleasure in schools seems absent (writer's memo). Despite recognizing that the adolescent enjoyed several aspects of the literacy, "the constant drill and routine in English class" made it less enjoyable.

Extending this idea, Nancy came to see how adolescents really "enjoy the creative assignments and texts the most which are, unfortunately, often absent in the class." Another PST said that she learned that "interest in what they are reading is hugely important."

Several PSTs shared some of the ways in which they were surprised by what they learned. One PST wrote, "Some of my interviewee's responses were not what I expected and my direction went differently than I expected as well." This realization is important, because it shows that PSTs' assumptions or expectations could be challenged or revised. One of the hardest aspects of teacher education is working to uncover and name some of the assumptions and expectations, positive, negative, or other, that PSTS carry with them when meeting young people. PSTs naturally tend to transfer their own adolescent experiences or bring a fixed idea about a student or student group instead of stopping to really try to see and understand life from the student's perspective.

For example, according to Peter, who interviewed his own adolescent brother living in the same house, "it was a great bonding experience. He normally doesn't talk about school, and I learned a few things that I normally wouldn't have gotten an answer to" (writer's memo). This statement supports the idea that different modalities create opportunities for different kinds of interactions and relationship building. The act of working on a video changed their typical dynamic, and his brother opened up about literacy, literature, and school in new ways. Jesse wrote in her memo, "I learned about their willingness to learn, yet they never feel that teachers cater to the books and topics they are interested in."

This finding emphasizes the value of technology, not as a mere hook or way to relate to young people, but as a way to create a meaningful space for teachers to connect with young people about their stories and histories. The audio and video may be a motivating and fun tool, but the real meaning and value comes in the fact that new stories are able to be told, and existing relationships are able to be deepened. Jasmine's digital story offered insight into how she came to see some

similarities across differences and difference across real or perceived similarities. See Figure 3 for a screenshot of a clip from Jasmine's digital story.

Figure 3 Screenshot From Jasmine's Digital Story

This finding also includes the collection of examples we found related to how this project supported PSTs to see the possibility of this space for students to share their stories. Several PSTs noticed that this project allowed them to think about or share a story of their own literacy history, maybe something they had not thought about or reflected on in years, yet it connected closely to their interest in teaching. As Jessica said, "I focused on IEP's [individualized education program] + literacy + I was happily surprised by how determined + motivated my students were to overcome their IEPs" (writer's memo). Watch and listen to a clip of Jessica's digital story to hear more about how Jessica came to new learnings related to IEPs by inquiring into literacy with this young person.

Video 1 Excerpt from Jessica's digital story (https://youtu.be/QgE2bR96Cpc)

Several PSTs reflected on the role this format and the collection of modes played or could play for adolescents to tell their stories. Rahim said in his interview, "It can give students the chance to use technology to tell stories." Once again, this idea illustrates how the technology is used in the service of meaningful learning. It is not technology for the sake of technology, but rather recognizing how a different form can be used to narrate students' stories and present their ideas in complex, multimodal ways. Jasmine found that, for the most part, her students loved being recorded and, according to her, "in the spotlight" so that this medium made it "really easy to get their perspective on things (personal interview).

An important part of doing this project in the context of a teacher preparation course was for the opportunity for PSTs to share their digital stories with their fellow aspiring ELA teachers. The digital stories dramatically expanded the

number of stories and lives that entered our room, dramatically expanding PSTs' understandings and conceptions of adolescents and literacy.

PSTs enjoyed watching the other stories. Ashley commented, "I did really like watching the digital stories and seeing what everyone else came up with. And they were all so different" (personal interview). In keeping with the effort to ensure that PSTs work hard to see their students, this assignment brought so many more individual stories into our room. In Ashley's memo she said, "I liked seeing how other peers crafted their story and found connections with their students." Jasmine also talked about watching her peers' digital stories. She was struck by how interesting it was to get students' perspectives. PSTs' comments offered evidence for how much they valued and wanted to honor students' stories.

Discussion

The format for this assignment was selected because of its capacity to capture adolescents' and PSTs' beliefs, images, and voices and compile them into a coherent narrative around the PSTs' literacy histories and the literacy history of their adolescent interviewees. The data indicated that this project helped to deepen individual PSTs' understandings of and empathy for the adolescents they interviewed. This finding supports the tenets of the Culturally Responsive Computing framework (Scott, Sheridan, & Clark, 2014) in that this assignment created space for PSTs to connect with young people through technology. Yet, importantly, the technology supported PSTs' engaging in a critical inquiry into literacy and ELA education in order to ultimately enrich how PSTs imagine the young people in their classrooms.

Students were given room to examine societal issues, power relations, culture, and identity *as* they drew on new technologies and created technologically mediated products. For example, as in one PST's inquiry, what are individual and collective assumptions about what it means to have books in the home? Or, in the spirit of another PST's DST inquiry, how can we complicate the notion of "disengagement?" In other cases, young people's stories may surface memories or storylines about a younger life that had been forgotten.

We also found, however, that the step of sharing the digital stories with the entire ELA methods class was critical to expanding PSTs' empathy for all of the unique young people in the different classrooms, schools, and districts reflected in our one university classroom, creating a kind of collective intelligence about adolescents' literacies. By watching and listening to one another's stories, PSTs expanded what they knew or what they thought they knew about adolescents' literacies. They also learned more about their fellow PSTs' literacy histories.

We have shared here the many ways in which this work facilitated PSTs to develop their digital literacies and commit to a pedagogical stance of learning along the way and a willingness to tinker to figure it out. This work made it clear, however, that many teacher candidates are completing their licensure programs without feeling particularly confident, well-practiced, or well-prepared to integrate technology into their pedagogy. Although we found that technical roadblocks and obstacles should be anticipated as part of the project, we also found that, in some cases, a lack of available technology often impedes progress for all. Not surprisingly, we learned that many secondary schools do not have reliable and consistent access to

technology. We also found that many of our university students struggled with reliable and consistent access to hardware and software.

The first and third findings highlight the particularly important ways that technology can play an instrumental role in these difficult times in that digital stories can emphasize the humanity of young people and they can open a new window into the less visible aspects of adolescents' lives. PSTs see their students as more human. Instead of a student who is different from the PST or a student who is primarily defined by their status as an EL, PSTs came to see a host of other important interests and identities of the same student.

The chance for PSTs to connect 1-1 with students, with the ultimate goal of weaving their unique stories together, was significant for developing PSTs' empathy for young people. It helped break down some of the common misconceptions and stereotypes of young people, particularly young people in urban schools, students who are immigrants to the United States, students on IEPs, students who struggle to read, students who are quiet, and more. Thus, instead of designing curriculum based on what PSTs are told about students or their assumptions about students on their initial visit, this multiphase, multimodal project pushed teacher candidates to consider the less visible, more nuanced elements of students' lives.

Thoughts Moving Forward

Highlighting the idea that the actual lived experience is critical and key to encouraging PSTs to understand the potential value of it, one PST recommended doing this project more than once in a semester. He suggested that by doing it twice, PSTs could quickly build on some of the skills they developed the first time. Recognizing the digital story as a form of writing, he said, "writing is like anything else: the more you do, the better you become" (Rahim, personal interview).

Although many students found one digital story to be adequate as a single experience and some found it too demanding and time consuming, the idea to ask PSTs to engage in at least two digital stories is promising, in that it would encourage further development of PSTs' digital literacies and it would further expand PSTs' learning about adolescents' literacies.

We found that this DST project offered one way to encourage PSTs to avoid the dangers of the single story. As Adichie (2009) said in her TedGlobal talk, the danger of a single story is that it becomes the one story and if we only hear one story we risk "critical misunderstanding." By inviting PSTs to interview and engage in an inquiry into literacy histories *with* adolescents, they can start to gather a collection of stories, all sharing a unique perspective on the world and a unique literacy history.

It may be difficult for PSTs and young people to share all parts of their identities, or they may be reluctant to share an identity that might make them vulnerable in some way. This work does not require PSTs or adolescents to share pieces of themselves that could put them in some jeopardy. Rather, in and through relationship building and rapport PSTs and students may be able to connect as humans who could support both to learn more about themselves and others.

We found that digital storytelling offers teacher educators and PSTs a platform that can be used to facilitate inquiry *with* young people. This example of a multiphase,

multimodal assignment within a content area teacher education course may encourage other teacher educators to think deeply about the role of digital literacies in their teacher education courses and how they could use technology to support meaningful, connected learning in these times. We hope that this work will urge other teacher educators to identify instructional approaches with technology that can be used to foster connectivity, empathy building, and inquiry in this digital era.

Based on our examinations of PSTs' digital stories, PSTs' written reflections, and individual interviews, we are encouraged that requiring PSTs to produce this kind of literacy narrative and story as part of an ELA teacher preparation course helps to develop PSTs' connections with students as humans, foster their commitment to inquiry *with* young people, and enhance PSTs' own digital literacies. Integrating and requiring this kind of project is not without challenges and obstacles, for teacher educators and teacher candidates.

Teacher educators must be well-prepared to develop an assignment that will engage the students and foster their development with the content of the course, but they must also provide a substantial amount of technical guidance and support. Support could come with guest speakers, peer-to-peer workshops, online resources, and digital storytelling workshop time. A clear rubric assures the PSTs that the goal is to learn about adolescent literacy and to evolve in their own digital literacy pathway, wherever they are starting, and that a professional level story is not expected.

Ultimately, PSTs' published digital stories revealed that they were coming to new understandings of the experiences of young people and that they were positioning themselves in new ways in relationship to adolescents. Ultimately, PSTs were forging a connection and relationship with the young people and not just writing about them. This expectation to weave together PSTs' investigations of their literacy history in tandem with the literacy history of current adolescents seemed helpful in leading PSTs to new understandings of the purpose and power of literacy education in the face of persistent educational inequities and social injustice.

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