Learners Without Borders: Connected Learning in a Digital Third Space

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Authentic field experiences are an important aspect of most teacher education programs, yet collaboration often is difficult because of distance and limited resources. This collective case study aimed to explore the experiences of 30 ninth-grade English language arts (ELA) students and 17 preservice English education teachers as they collaborated in a digital Third Space on activities designed with Connected Learning (CL) principles. Through the free, online tool Slack (www.slack.com), the participants cocreated video remixes and built connections without actually meeting face to face. The study aimed to assess if digital Third Spaces constructed with CL principles could provide an authentic field experience, potentially offering a chance to improve preservice ELA teachers' self-efficacy with teaching digital literacies and offer high school students an opportunity to experiment with multimodal composition. Instruction was designed with CL principles and used digital tools to help forge human connection. The findings suggest that digital Third Spaces and online collaborative networks can serve as viable sites for authentic field experiences when face-to-face partnerships are difficult. However, they also suggest a need for ELA teacher educators to work with their preservice teachers to develop strategic ways to use digital environments to build genuine relationships.

Recently, as I set up my PowerPoint slideshow and computer for my undergraduate digital literacies course, I overheard one of my students complaining: "We hardly ever get to talk to real students, and then we are expected to just go in and teach them. I'm not very tech savvy. What if they know more than I do?"

I pretended to shuffle a few papers and adjust the settings on my computer, but I was fascinated by her comments. In my opinion, the preservice teachers at my university had ample opportunities to interact with students in other courses before they embarked on a year-long student teaching experience. Yet, this was not the first time I had heard a future teacher say she feared a disconnect between her own technology knowledge and her future students'.

"I think things have changed a lot since I was in high school" is a comment I have heard frequently while teaching a digital technologies/new literacies in English language arts (ELA) course – even though many of my preservice teachers are in their early 20s and only a few years out of high school. Reassuring them that not all teenagers are technology wizards does not seem to allay their fears. They want real-world, interactive experiences and the chance to test the waters with actual students before they are expected to teach them.

Although we reflect critically on Marc Prensky's (2001a; 2001b) theories about "digital natives," the preservice teachers at my university have genuine concerns that their future students' digital technology knowledge outstrips their own. Prensky's (2001a) notion that all students born around the Millennium are adept with digital technology does not always jibe with the reality of today's preservice teachers – many of whom may demonstrate some skepticism about technology use in schools and its relevance in an ELA classroom (Kist & Pytash, 2015; Laughter, 2015).

They have learned in their teacher education program about the importance of bridging the binary of traditional texts and newer practices (Hicks, 2006; Kajder, 2006; Swenson, Young, McGrail, Rozema, & Whitin, 2006). Yet, they feel at a loss on how to begin (Banas & York, 2014).

I was interested in finding a way for these future ELA teachers to increase their sense of self-efficacy in integrating technology into the ELA curriculum and to gain firsthand insight into the practices and beliefs that today's teenagers have about digital literacies. Authentic field experiences are an important aspect of most teacher education programs (Le Maistre & Pare, 2010; McMahan & Garza, 2017), and these encounters with the real world of school are particularly crucial for encouraging preservice teachers to integrate technology into the curriculum (Banas & York, 2014). Without opportunities to interact with students directly, preservice teachers may not be able to address the learning needs of an increasingly diverse school population (Case & Traynor, 2016; Darling-Hammond, 2006).

I wanted to provide a collaborative digital exploration in tandem with high school ELA students that would give the preservice teachers a chance to improve their self-efficacy and practice working with digital literacies before they embarked on their important yearlong student teaching experience. In addition, I wanted to offer a group of local high school students an opportunity to create multimodal compositions and interact with digital tools they may not have had previous experience using.

Creating mutually beneficial partnerships is one of the five standards that the Council for the Accreditation of Educator Preparation (CAEP) recommended in 2013 for universities seeking accreditation for their educator preparation providers (EPPs). CAEP's Standard 2 states that EPPs must establish partnerships in which "partners co-construct mutually beneficial P–12 school and community arrangements" (Council for the Accreditation of Educator Preparation, 2013, para. 2).

These partnerships are meant to provide rich opportunities for K-12 schools, as well as the universities that seek to work with them. Rather than using K-12 schools as training grounds for inexperienced future teachers, CAEP encourages partnerships in which both the preservice teachers and their K-12 students profit equally from the connection. Tangible evidence of the mutual benefits is required of EPPs wishing to maintain CAEP accreditation.

However, I had experienced roadblocks with school partnerships in the past. Finding willing partners for a digital technology collaboration between my university and some local schools had proven difficult due to district paperwork and reticence by some parents and administrators to allow college students to work with underage minors. In addition, some veteran teachers had been reluctant to engage in a technology project due to time commitments and, perhaps, potential embarrassment over their own lack of technology knowledge (as found by Fabry & Higgs, 1997).

To address these concerns, I conceived of the idea of a virtual partnership, one in which my ELA preservice teachers and students from a local high school would collaborate together on a digital project, but would not meet face to face. This approach would allow a high school classroom teacher the opportunity to integrate the project into her regular curriculum as she saw fit (and learn to use new digital tools at her own pace without university onlookers), and it would eliminate the hassle of getting all of the preservice teachers to a local high school in a large metropolitan area notorious for its traffic jams.

In addition, the partnership would embody the heart of the connected learning (CL) framework (Ito et al, 2013), which emphasizes interest-powered, peer-supported, shared-purpose, academically oriented, production-centered, and openly networked principles. This article details the ensuing study, in which 17 English education preservice teachers collaborated with 30 ninth-grade ELA students through a digital Third Space.

The following section provides a description of Third Space theory and its application to literacy and multimodal studies. More information about the CL framework and how it tied into Third Space theory is also included. The methodology and data sources are described, followed by the findings, which indicated that digital Third Spaces constructed with CL principles can offer authentic learning experiences and act as viable sites for field work when face-to-face partnerships are difficult. The findings also suggested a need for ELA teacher educators to encourage their preservice teachers to develop strategic ways to use digital environments to build genuine relationships.

Digital Third Space Theory

The Third Space was conceived as a political and cultural site of resistance by Bhabha (1994). In this original definition, the Third Space served as a place where previous symbols of culture – including those of colonial oppression – could be "appropriated, translated, rehistoricized and read anew" to represent a new ideal (p. 55).

In this paradigm, a hybridized amalgam of cultures, practices, and language could thrive. Bhabha (1994) defined the First Space as that in which indigenous cultural knowledge and identity are created. The First Space is the cultural origins of a people before anyone attempts to overtake or influence them. The Second Space, then, consists of imposed knowledge and culture and is one that is imparted on indigenous people – often against their will.

The Third Space, Bhabha (1994) theorized, could be a hybrid and alternative paradigm in which two contradictory cultural identities merge and interact (Forgasz, Heck, Williams, Ambrosetti, & Willis, 2017). It belongs neither to the indigenous culture nor the colonial culture; it is a third, neutral site that encompasses aspects of both the First and Second Spaces. Bhaba felt that "by exploring this Third Space, we may elude the politics of polarity and emerge as the others of ourselves," (p. 56).

Moje et al., (2004) sought to expand the definition of Third Space beyond the political sphere and use it as construct for envisioning a classroom environment. They aimed to capitalize on students' funds of knowledge (Moll, Amanti, Neff & Gonzalez, 1992), arguing that classroom spaces could be constructed to bridge in- and out-of-school literacy practices. The classroom could serve as the Third Space in which students' physical, cultural, and social practices were blended and honored.

Guiterrez (2008) argued that the Third Space could act as a zone of proximal development (Vygotsky, 1978) in which students were able to learn rapidly because the learning was socially situated and incorporated aspects of their own cultural knowledge. In this Third Space/ZPD, students could mesh their sociocultural practices and lived knowledge with the formal learning environment. Learning occurred in overlapping contexts, rather than in a linear or horizontal fashion.

This notion was applied to a digital context by Benson (2010), who demonstrated that a Third Space could be constructed through the inclusion of New Literacies (Cope & Kalantzis, 2000) in the traditional ELA curriculum and position students as experts. Benson wrote about "Bud," who avoided reading and writing in his 11th-grade ELA course and used a book as a screen to have covert conversations with friends instead of working.

Bud became engaged with the content, however, when he had the opportunity to complete a multimodal assignment. This assignment allowed him to bring his funds of knowledge on digital tools and platforms into his ELA work. The assignment gave Bud permission to alter his identity and enter a Third Space, in which he could demonstrate his digital knowledge and artistic skill in a way that traditional assignments denied. It was "a space in which he had expertise, but because discussion parameters were defined solely by print-based literacy activities, his (previous) efforts were ineffective" (Benson, 2010, p. 561).

Finally, the application of Third Space theory to the digital realm was proposed by Potter and McDougall (2017), who posited that websites and online spaces could act as "a negotiated and contested area in which meanings are made and shared, some of which may relate to encountering new knowledge, learning or developing new skills and dispositions," (p. 7). **T**his study is situated within this definition, as it sought to use the digital Third Space as a place where the preservice teachers and secondary students could bring their out-of-school expertise and interact, each transforming the other in a shared space that belonged to neither of them, but to all of them.

Within this shared realm, the participants in the study were able to create remixes related to the themes of a short story with the online website Slack (www.slack.com) acting as the Third Space. The collaborative website allowed the participants to bring their cultural funds of knowledge related to movies, music, and pop culture and combine them with the traditional, academic study of literature.

Connected Learning Principles

The intersectionality of Third Space theory and CL formed the framework for this study. CL (Ito et al., 2013) addresses bridging the gaps between adolescents' in- and out-of-school digital media use and leverages social relationships with peers and expert adults. Like Third Space theory, it relies on students' funds of knowledge to create a new space in which participants can merge their shared interests with academic pursuits.

The CL framework relies on four main principles through which experiences are designed: (a) contexts are knitted together and peer supported, interest powered, and academically

oriented for learning; (b) learning experiences are production centered and openly networked with a shared purpose; 3) design principles intentionally promote inclusion, doing, challenge, and interconnectivity; and 4) new media are used to foster engagement, increase access to knowledge, expand social supports, and promote diversity (Ito et al., 2013, p. 12). Learning opportunities that lean on these principles are more likely to use new media and digital tools to promote equity and "draw linkages between existing approaches" (p. 34).

CL offers a new way to think about instruction and relies heavily on the use of digital technology and new media. In CL, students are encouraged to pursue their own "personal interest or passion with the support of friends and caring adults, and … link this learning and interest to academic achievement, career success or civic engagement," (Ito et al., 2013, p. 42). Educators designing lessons that incorporate CL principles can use new media to "enable youth who otherwise lack access to opportunity" (p. 8). CL can help educators to build more entry points for students who previously have been marginalized, and these students, in turn, can use their interests, their peers, and caring adults to enter the academic conversation. It is the intersectionality of interest-powered, academically oriented, peer-supported activity that lies at the heart of CL, as shown in Figure 1.
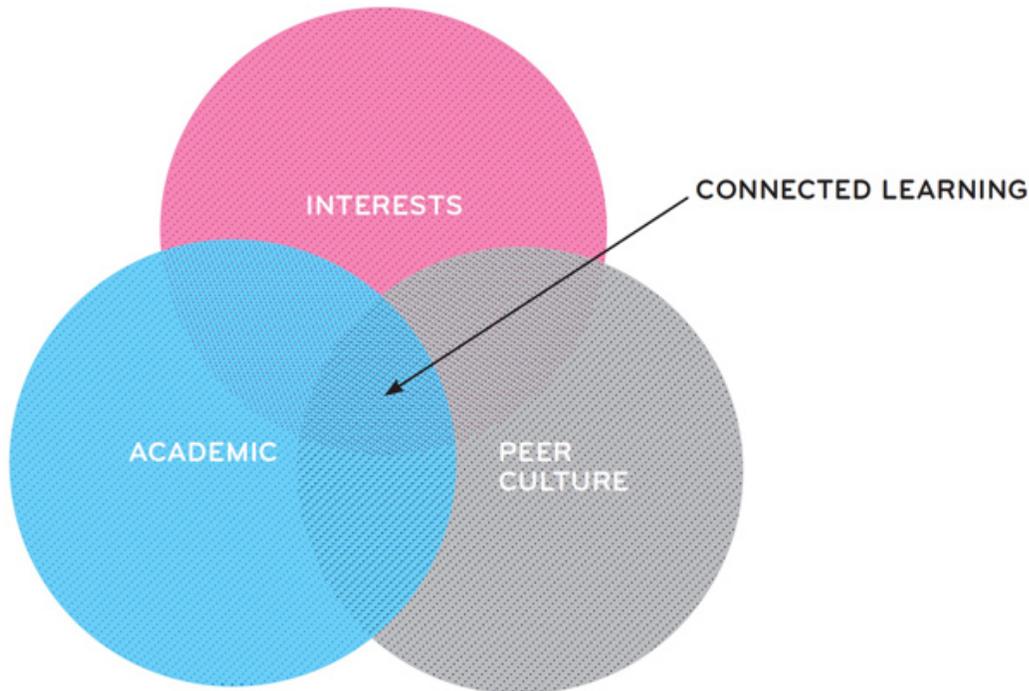
Figure 1. *Venn diagram showing the overlapping spheres that situate connected learning. Adapted from "Spheres of Connected Learning" by M. Ito, K. Gutierrez, S. Livingston, B. Penuel, J. Rhodes, . . . S. C. Watkins, 2013,* Connected Learning: An Agenda for Research and Design*, p. 63. Copyright 2013 by Digital Media and Learning Research Hub. Reprinted with permission.*

In one case study, three South African university students demonstrated that CL is not defined by specific technologies, but is a way of being or philosophy that runs as a thread, cross-cutting through the settings of school, home, peer, and popular culture (Brown,

Czerniewicz, & Noakes (2015). In the study, the three participants leveraged their academic training in film, media, and technology to produce creative work that they shared with friends and followers. Their practices reflected the interconnectivity of the CL principles since the participants used their academic knowledge for creative production outside of school. They took what they learned in the classroom, linked it with prior knowledge, and advanced it by learning new skills on their own. They used online sites for journaling and writing, as well as sharing video creations, thereby embodying the connectivism of the CL principles.

Educators who draw on CL to design activities may be able to motivate students and enhance engagement (Secret, Bryant, & Cummings, 2017; Vartiaien, Pöllänen, Liljeström, Vanninen, & Enkenberg, 2016). Some educators have used the CL principles to design after-school programs in which youth pursue an interest or passion with the support of peers and caring adults (Afterschool Programs, 2015). The programs were aided by a digital ecology that included social media and digital tools, as well as projects that tapped into participants' interests. Through remixing, creating, and researching, students were inspired to pursue a learning goal that was interesting, academic, and motivating.

Although new media and digital technology are important factors in CL, activities that are initiated by learners and lean on connectivity are likely to have more impact on engagement (Bali, Caines, DeWaard, & Hogue, 2016; Maul et al., 2017). Ito et al. (2010) posited that learning activities initiated by adults have "an unavoidably coercive dimension that is situated in a systemic power differential between adults and children," (p. 23). Although the adults may be caring figures, this power difference disrupts the true essence of sociocultural learning.

Since "kids gain most of the knowledge and competencies in contexts that do not involve formal instruction," (Ito et al., 2010, p. 21), learning designed with CL principles leans heavily on peer involvement and peer-to-peer sharing. Expert adults, while important, do not initiate the learning.

Teacher Education in Digital Third Spaces

Historically, field experiences at my university are conducted when students in the English education program begin their final year of study. Although the preservice teachers are carefully mentored and supervised, there is an expectation that their classroom and academic knowledge will translate easily into work with students. However, that is not always the case, as student teachers often struggle to find their footing and transfer pedagogical understandings into practice (Abas, 2016; Al-Hassan, Al-Barakat, & Al-Hassan, 2012).

I wanted to offer the preservice teachers in my course the opportunity to interact with students before they went into the field to teach them in person. Using an online space as a site for building relationships and learning is not a new idea. Other researchers have investigated the use of social networks and online communities as learning spaces for preservice teachers to connect, share stories, and interact (Booth, 2012; Manca & Ranieri, 2017; Munoz, Pellegrini-Lafont, & Cramer, 2014).

Barab, Makinster, and Scheckler (2003) defined these online communities as "a persistent, sustained social network of individuals who share and develop an overlapping knowledge base, set of beliefs, values, history, and experiences focused on a common practice and/or mutual enterprise" (p. 238). These digital sites can act as informal spaces in which preservice teachers and their students make connections.

Seglem and Garcia (2015) demonstrated that digital tools and online sites can help preservice teachers disrupt previously held beliefs about their future students as they examine their students' discourse. Yet, little research exists in which a digital Third Space was investigated as a place for praxis, a place in which preservice teachers can actually practice mentoring and teaching.

Connected Learning and Digital Third Spaces

In this study, the digital Third Space was envisioned as a place in which activities and interactions could be designed with CL principles at the forefront. The creation of a remixed digital composition would be shared work that explored ideas connected to culture, visual rhetoric, and digital literacy (as in Reed & Hicks, 2016). A compilation of learning theory, popular culture, digital technology, and the business world were remixed to produce a space in which participants met to interact and learn.

Participants used the website Slack as a digital Third Space and meeting point into which they brought their own interpretations and connections to the short story "The Sniper" (O'Flaherty, 1923). The website Slack allowed participants to engage in creative production that was peer supported, interest driven, and academically oriented and had a shared purpose within an openly networked platform. Supported by CL principles, the instruction was designed to tap into participants' interests and knowledge of pop culture and encourage them to make connections between this knowledge and the themes of the story.

Since both preservice teachers and ninth-grade ELA students participated in the study, the range of knowledge and interests varied widely. The preservice teachers wanted to explore notions of identity and what it meant to be a teacher, as well as connect their knowledge of movies, music, and pop culture with the ninth graders. The ninth graders were interested in learning more about remixing and using digital media composition to express ideas. Together, the participants were able to pursue their individual and collective interests, aided by new media, the ninth graders' teacher, and me.

CL principles and the website offered a way to provide an authentic field experience for the preservice teachers, as well as an engaging learning experience for the ninth graders. We sought to heed the advice of Darling-Hammond (2006) who implored teacher educators to "venture out further and further from the university and engage ever more closely with schools in a mutual transformation agenda, with all of the struggle and messiness that implies," (p. 302). In the end, the student teachers and the ninth graders were transformed by their shared experience in that they were able to experience and create in a way that previously was inconceivable (Dudeney, Hockly, & Pegrum, 2013; Puentedura, 2013).

Methodology

A collected case study (Creswell, 2007) design was used, in that multiple cases were considered at once. Each of the preservice teacher/ninth grader groupings was considered an individual case and, as Merriam (1998) recommended, each was analyzed independently and then again across cases, looking for similarities and differences.

Since I was particularly interested in seeing if the digital Third Space could work as an authentic field site and help the preservice teachers' self-efficacy with technology, the following two research questions were posed as evaluative questions (Stake, 1995):

1. How effective is a web-based file-sharing site as an authentic field site in the preparation of preservice English language arts teachers?

2. Does a web-based file-sharing site improve preservice English language arts teachers' self-efficacy in teaching with digital technology?

The preservice teachers worked in groups of two to four and were paired with three-to-five-person groupings of ninth graders. The preservice teachers were invited to choose their partners; the ninth graders were strategically grouped by their teacher according to their interests and abilities. These preservice teacher/ninth grader pairings were instructed to give themselves a unique name and carve out an identity. These identity groups then were posted as five "teams" on our Slack site. The team names reflected the students' cheerful and playful nature: the Lobsters, the Pineapples, the Hashslingingslashers, the Pinecones, and R.I.P. Harambe.

The preservice teachers sent introductory videos to their ninth-grade partners via my email correspondence with the classroom teacher, and the ninth graders, in turn, replied with their own introductory videos. In this way, the participants were able to see each other on video and begin to form impressions and ideas about each other as they commenced their work.

In class with the preservice teachers, I likened this step to learning student names and forging connections – a key component to building relationships in the classroom (Darling-Hammond, 2006; Gay, 2003; Kirby & Crovitz, 2013). Table 1 displays hyperlinks to a few of the introductory videos from the preservice teachers. (Videos from the ninth graders are not shown for privacy reasons.)

Table 1
Introductory Videos from Preservice Teachers

Group	URL Link to YouTube video
Group 1 Video	https://www.youtube.com/watch?v=92ng2GioCSU
Group 2 Video	https://youtu.be/4u4rH0-qs9k
Group 3 Video	https://youtu.be/ryHE40WmhCo

After introductions, all participants listened to U2's "Sunday, Bloody Sunday" song and read aloud O'Flaherty's (1923) short story, "The Sniper," about an Irish revolutionary during the Irish Civil War. The ninth graders' teacher, Mrs. G., and I pushed our respective classes to make connections between the themes of the song, the Irish Civil War, and the plight of the Irish people over the past 100 years in a class discussion.

After discussions, Mrs. G. and I showed our students the website Slack and introduced them to its functions. The preservice teachers and ninth graders then used Slack as a repository to post ideas for creating a remix on the themes of the story. Table 2 displays hyperlinks to some of the finished remixes.

The preservice teachers ultimately did most of the technical work of digitally creating the remixes, because they had previous experience with creating remixes from another project they had completed in my class. However, the intellectual work for this study was shared by all participants. At the end of the project, the preservice teachers were invited to come out to the ninth graders' school and view the finished remixes in a film festival. The ninth graders then were interviewed collectively for 45 minutes to learn about their views of the project.

Table 2
Digital Remixes Created by Participants

Group	URL Link to YouTube Video
Get Lit	https://www.youtube.com/watch?v=1inOP3GB0ok&feature=youtu.be
Lobsters	https://youtu.be/HMf4Ae5vNhk
R.I.P. Harambe	https://www.youtube.com/watch?v=sMohxblW9Js&feature=youtu.be

The preservice teachers were interviewed collectively for 45 minutes, wrote individual reflections, and completed a survey on the experience. Mrs. G. was interviewed about the experience and wrote a reflection.

Data Sources, Collection and Analysis

To understand the participants' views of the digital Third Space and the way in which CL principles were enacted, a variety of qualitative data were collected: preservice teacher written reflections, classroom observations, the Slack posts, the remixes, and follow-up interviews with the ninth graders, the preservice teachers, and Mrs. G.

Slack, which is a web-based file-sharing tool, typically is used by small to medium-sized businesses as a repository for project ideas and notes. It acts as a workspace in which company team members can post videos, images, text, messages, calendars, and more to keep themselves organized. It is billed as a one-stop-shop in which workers can communicate and collaborate. It typically is not used for educational research. Figure 2 displays a screenshot of one of the collaborative pages used in this study.
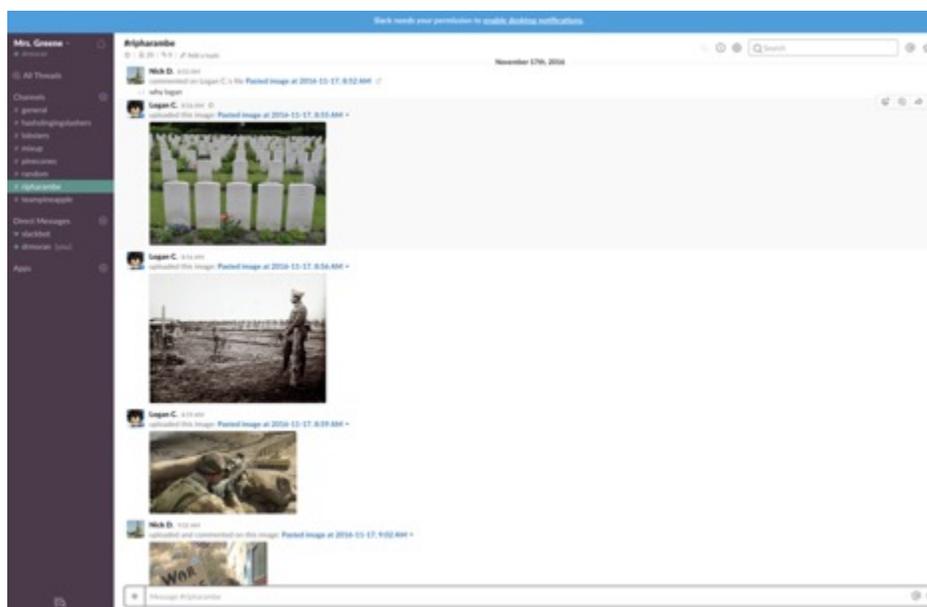

Figure 2. *Screenshot of Slack web page. (Note: A screenshot of one of the Slack collaborative pages with images uploaded by the high school student participants. Groups/teams are in the box on the left.)*

For this study, we used the free version of Slack, which also has upgraded versions that require a monthly fee. The participants chose Slack as their collaborative site after reviewing the features of other free, file-sharing, collaborative, web-based tools, including Twiddla.com, a Wiki through Wikispaces.com, and Google Drive. Slack was selected unanimously by the participants because it "looked easier" and "has a mobile app" (Interviews, 9 Nov. 2016). Twiddla.com and a Wiki were eliminated because of perceived complexity, and *Google Drive* was eliminated because it was blocked at the high school. One preservice participant group wrote in their reflection,

We decided to use #slack.com for a number of reasons. The modern design/format is something we think the students would appreciate and be excited to use. The communication on the website is much easier to use because of the multiple options. There is a direct message and group messaging option. Both of these forums are familiar to students because outlets such as text messaging and group messages are used on a daily basis. This will make the students more comfortable with the site and more motivated to openly communicate with the group Information is not lost because you're able to save it. We unanimously decided that we would all use slack.com in our classrooms one day. (Written reflection, 9 Nov. 2016)

To make sense of the data, a matrix was created with four broad categories (as recommended in Bogdan & Biklen, 1992), and these included "positive feelings about Slack," "negative feelings about Slack," "positive feelings about the project," and "negative feelings about the project." These categories were refined and examined in a recursive process (Merriam, 1998) and then analyzed using the constant-comparative method (Glaser & Straus, 1967) with the intent that they reflected the purpose of the research and were exhaustive and mutually exclusive. All of the written data was subject to line-by-line coding.

A close reading of the data led to the creation of aggregated categories (Stake, 1995) in which seven main themes emerged, listed in ascending order of frequency:

1. Slack's ease of use;
2. Digital third spaces as facilitators in collaboration and relationship-building;
3. Intentions to use a similar tool or project;
4. Growth in technology self-efficacy;
5. Positive collaboration with high schoolers;
6. Slack's difficulties;
7. Digital third spaces as hindrances in collaboration and relationship-building.

Code labels, definitions, and examples are shown in Table 3.

From here, a graduate research assistant and I further winnowed the data (Wolcott, 1990, as cited in Stake, 1995), setting aside the information that was not directly related to the research questions. We collapsed the seven main categories into three overarching themes, which are discussed in depth in the next section.

Table 3
Code Labels, Definitions, and Examples of Quotes From Preservice Teacher Participants

Code Label	Definition	Quote Example
Slack's ease of use	Comments that mentioned the ease or intuitive use of Slack's functions.	"It was such an easy platform that enabled us to post our ideas with literally the click of a button."
Digital third spaces as facilitators in collaboration and relationship-building	Comments that referenced the positive aspects of working or collaborating through a website or digital platform.	"I believe the idea of having preservice teachers collaborating with students through a digital third space is a great way for preservice teachers to get hands on experience not only working with students, but also utilizing technology to do it in an ever technologically advancing society."
Intentions to use a similar tool or project	Comments that mentioned trying a similar project or using a digital site to collaborate.	"I will definitely be using this program in future classrooms for group projects and other collaborations."
Growth in technology self-efficacy	Comments that referred to the preservice teacher's own ability to use technology with students.	"I felt that my self-efficacy with technology grew, and that I have learned a lot about multiple online tools that I would use in my classroom."
Positive collaboration with high schoolers	Comments that mentioned the positive aspects of working with high school students.	"I loved that we were given the opportunity to interact with high school students in our area."
Slack's difficulties	Comments that discussed Slack's functions from a negative aspect.	"What I did not like about my experience with slack this go around was the fact that it was extremely difficult to save images and videos."
Digital third spaces as hindrances in collaboration and relationship-building	Comments that referred to relationships or connections from a negative aspect.	"I know that the point of this collaboration was to be completely digital, but I think that if we were able to meet in person once before presenting the video, we would have grown a relationship with the students."

Findings

Using the CL principles to design instruction and consider the collected data helped us to make strategic decisions about our data analysis. We aimed to look for relationships and connections between the participants, as well as the interconnectivity of the participants' actions. Our main goal was not so much to validate Slack as a good site for collaboration but to see if actual connections could be forged without a face-to-face meeting in digital Third Space.

We sought to heed the advice of Noddings (2013), who advocated for the "maintenance of conditions that will permit caring to flourish" (p. 5). Through this lens, we winnowed the data into three main themes:

1. Digital Third Spaces can function as authentic field sites for preservice ELA teachers.
2. Collaboration in a digital Third Space can increase ELA preservice teachers' self-efficacy in teaching with digital technology.
3. Building genuine relationships in a digital Third Space is challenging.

Finding 1

The preservice teachers approached the project with excitement, but also cited their concerns that the timing of the collaborative work would be a hindrance. Their class met at 8 a.m. twice a week, while the ninth graders met every day at 7:30 a.m. We initially planned to have the two groups Skype (video chat) one another, but Mrs. G. did not have experience with Skype and felt that this added another layer of technological complexity that she did not want to explore.

In addition, she struggled to understand the concept of remix (calling it repeatedly a "mixup" instead of "remix") and worried that she could not navigate Slack's functions. In her postproject interview, she said, "I spent a great deal of time figuring all the ins and outs before I finally learned how to connect both my students and the [preservice teachers] on the same account. Unfortunately, this took more time than I planned for" (interview, 21 December, 2016).

Despite these initial technological hurdles, the collaboration's affordances surprised all of us. The preservice teachers said they enjoyed the opportunity to connect with ninth graders without having to drive out to the school to meet with them directly. They liked the connection with the students and enjoyed the cheerful rapport they developed. They also felt that they got to spend time with the ninth graders and gain some insight into their language, work ethic, thought processes, and relationships with each other. One preservice teacher wrote in his reflection, "I found it to be really enjoyable mostly because I felt like a teacher/mentor to the high school group I was working with" (Written reflection, 30 Nov. 2016).

The Slack posts also revealed the humorous and teasing interactions that the ninth graders had with one another. In one conversation between a preservice teacher, "Sarah," (all names are pseudonyms) and a ninth grader, "Joy," the collaboration felt like a moment inside the classroom with all of its messiness and distracted behavior:

> **SARAH**: I like the montage idea, guys. We can use the two sniper photos you chose to begin the video and then do a slash page opening to the theme you chose, "War Guilt Causes Family Tragedies." Sound good?
>
> **JOY:** But yes, it would be cool to do all of them. We need to have the theme first so people get what it is.
>
> **JOY:** ☺☺☺
>
> **SARAH:** What's going on in your classroom? lol

> **JOY:** I literally just heard someone across the room say "it won't let me use Mein Kamf" (Slack post, 28 Nov. 2016)

Another post also revealed the chaotic and joyful nature of a typical ninth-grade classroom. This post involved interactions between a preservice teacher, "Keisha," and three ninth graders, "Maggie," "Liza," and "Tyler." Keisha struggled to keep the students on task, just as she might have to do in a face-to-face field experience. After the students began teasing and getting off-task, Keisha redirected their behavior to focus on the remix.

> **KEISHA:** i think one should be the very last picture in the slide show
>
> **TYLER:** yea same. another good movie scene would be ones from the American Sniper
>
> LIZZZAAAA
>
> LIZZZAA
>
> MAAGGGIEEEEEE
>
> **MAGGIE:**TYLLLLLLLLLLLLEEEEEEEEEEEEERRRRRRRRRRRRRRRRRRRRRRR RRR
>
> **TYLER:** 😄
>
> **KEISHA:** why don't we just use these lyrics from hey brother but one of us would have to record them singing it. (Slack post, 18 Nov. 2016)

I mentored the preservice students on their interactions with the ninth graders, encouraging them to redirect unwanted behavior and largely ignore the inherent silliness of ninth graders. This mentoring opportunity was directly tied to the interactions the preservice teachers had within the digital Third Space and embodied the principles of CL, as well as advice I would have given them in a face-to-face field experience. The preservice teachers used their own interest-powered, academically oriented knowledge of pedagogy to guide the creative production inside the digital Third Space. They leaned on each other (peer-supported), as well as me (an expert adult) for the shared purpose of creating the remixes and interacting with the students.

The preservice teachers largely were in agreement that the project offered them valuable opportunities to interact with students and to test their teacher skills. In the low-stakes environment afforded by the digital Third Space, the actual teaching was more about guiding and directing than designing lessons. One preservice teacher wrote in her reflection that "it was a great experience to actually interact with current high school students instead of dealing with hypothetical scenarios" (Written reflection, 30 Nov. 2016).

Finding 2

In addition to offering real-world interactions with secondary students, another aim of the project was to boost the confidence of the preservice teachers and their self-efficacy in teaching with technology. Prior to the project, the preservice teachers remarked that they did not feel confident in their ability to integrate digital tools into an ELA classroom. Although the project came toward the end of the fall semester during a semester-long

course on digital literacies, the preservice teachers said they continued to feel shaky in their use of digital tools. They also continued to feel as if their future students would have greater knowledge about technology than they would.

The mutual creation of the remixes revealed that the preservice teachers could act as guides and facilitators in the use of digital tools. At the end of the project, in written reflections, the preservice teachers said they felt more comfortable with using technology and had a renewed sense that it was important to use digital tools in an ELA classroom. "I felt that my self-efficacy with technology grew, and that I have learned a lot about multiple online tools that I would use in my classroom" was a typical comment.

Another preservice teacher wrote,

> This project reminded me why I want to be a teacher and how important it is to use technology in the classroom. In fact, I believe preservice teachers collaborating with students in a third space should be something done more often because it is not only engaging to the students but it also allows them to think creatively. (Written reflection, 29 Nov. 2016)

Using the digital Third Space as a place in which the preservice teachers and the ninth graders could share their funds of knowledge allowed all participants a low-stakes environment in which they could post pictures, video clips, and music bits. The preservice teachers found that their knowledge of pop culture and technology was not so far removed from the ninth graders', and this realization boosted their confidence. The focus on interest-powered, peer-supported, shared-purpose, academically oriented, production-centered tasks complemented the preservice teachers' budding pedagogical prowess.

Finding 3

Six of the preservice teachers wrote in their reflections that they felt they carried the burden of creating the remixes and that the ninth graders could have done more to contribute to the final product. They expressed disappointment in their connections to their student partners and said that they felt much of the communication was one-sided.

Two of these six said that an initial face-to-face meeting with the ninth graders might have facilitated relationship-building. One of these two preservice teachers wrote, "I think that if we were able to meet in person once before presenting the (project), we would have grown a relationship with the students" (Written reflection, 30 Nov. 2016).

In one conversation that illustrated the preservice teachers' frustration from lack of communication, a preservice teacher posted on Slack:

> **EMILY:** Hey Team Pineapple! So we started compiling a video. I'm going to upload it…it isn't the final video yet, but we want to know where you guys would like to add stuff in! Let me know! (Slack post, 17 Nov. 2016)

She received no response after posting the remix. The next day, she posted,

> **EMILY:** Let me know where you want to add things OR where to change stuff! We went with the Theme Loss of Humanity when looked at from the perspective of one struggling with where their loyalty is placed. (Slack post, 18 Nov. 2016)

Her post remained unanswered.

In other conversations, the preservice teachers were left out of the banter, and the ninth graders chatted amongst themselves without input. This reinforced the ninth graders' relationship with each other, but made it difficult for the preservice teachers to break into the conversation. Figure 3 illustrates the closed nature of this ninth-grade online chatter. None of the participants' names are those of preservice teachers.

Figure 3. *Screenshot of student conversation. (Note: Screenshot of banter between ninth graders. No preservice teachers' comments were recorded in the four-minute exchange).*

When the preservice teachers did finally meet the ninth graders at a film festival at the high school, the participants appeared happy to see each other. One ninth grader shouted, "Oh they're here! They're here!" and clapped as the preservice teachers walked into the classroom. Mrs. G. reported that she felt some relationship had been established in the digital Third Space, but that a face-to-face meeting at the outset of the project would have helped with creating a bond. She said future iterations of the project would be successful if "the college students meet with the high school students prior to the start of the project to help establish a rapport with one another" (interview, 21 Dec. 2016).

Discussion and Implications

CL suggests that digital tools and new media can support students by bridging in-school and out-of-school literacy practices, as well as leveraging the input of trusted adults and

mentors outside the classroom. In this study, I sought to discover if a digital Third Space could act as a site for an authentic field experience for preservice teachers, increase their self-efficacy in teaching with technology, and provide a forum in which secondary ELA students and preservice teachers could build relationships.

Using the CL principles as a framework allowed me to think about ways in which the Slack website could help the participants capitalize on their connections with each other. By corresponding and collaborating in Slack, the participants were able to share their expertise on movies, songs, and other aspects of popular culture. The site became a neutral space that belonged not to one group or the other, but to all of them.

Since CL seeks to weave together a variety of expertise and experiences, this study demonstrates that new media and collaborative file sharing sites can facilitate that focus. Ito et al., (2013) wrote that CL "has an explicit focus on learning that is linked across the settings of school, home, peer, and popular culture" (p. 82). The specific ways in which new media can play a role are by (a) fostering engagement and self-expression; (b) increasing accessibility to knowledge and learning experiences; (c) expanding social supports for interests; and (d) expanding diversity and building capacity (p. 82). Table 4 shows the ways in which these four areas can be leveraged through digital Third Spaces such as Slack.

Table 4
Intersections Between Connected Learning and Digital Third Spaces

Connected Learning Theme	Digital Third Space Correlation
Fostering engagement and self-expression	The interactive environment promotes creativity and allows users to post content that they find engaging.
Increasing accessibility to knowledge and learning experiences	Users can interact in a way that positions them as experts, while others in the space benefit from this knowledge.
Expanding social supports for interests	Connections forged in the digital Third Space can focus on areas of mutual interest.
Expanding diversity and building capacity	The relative anonymity of the digital environment allows marginalized users to have a voice and agency.
Note: CL themes, as described by Ito et al. (2013).	

These findings demonstrate that participants were able to learn from each other in a way that promoted reciprocity and mutual benefits. Their activities and learning were designed with CL principles in mind, and they leveraged their interest-powered cultural knowledge to complete a shared academic task in an openly networked space.

The preservice teachers and the ninth graders used Slack for different purposes, but all were able to position themselves as experts at some point within the space. When the ninth graders posted pictures or suggested songs, they were drawing on their own funds of knowledge (Moll et al., 1992) to contribute to the discussion and the creation of a digital remix. When the preservice teachers posted pictures or suggested revisions to the remixes, they were able to position themselves as experts and act in a role that reflected that of a teacher.

The preservice teachers were able to use Slack as an authentic field experience and gain self-efficacy in their ability to teach with technology, while the ninth graders were able to use the same site to learn about the concept of "theme" in literature, as well as the idea of digital remix. The two groups had different interest-powered missions – the preservice teachers wanted to learn to teach and gain self-efficacy, while the ninth graders wanted to learn about digital remix and literary theme – but the digital Third Space gave all of them a shared venue for pursuing their goals.

The implications for this study reach far beyond the use of the specific website Slack. Other researchers have demonstrated that online environments can foster the creation of connections and relationships (DelliCarpini & Gulla, 2009; Kessler, 2013; Oliver & Stallings, 2014; White & Hungerford-Kresser, 2014); however, this study adds to the conversation and offers the possibility that shared activities designed in a digital Third Space with CL principles in mind can go further than simple relationship building. Digital Third Spaces can act as sites for field experiences and can provide a shared learning environment in which all participants can feel like experts.

Final Thoughts and Suggestions

One of the findings of the study was the participants' mutual desire to meet face to face prior to beginning their online work. Two of the preservice teachers mentioned this in poststudy reflections, as did the ninth graders' teacher, Ms. G. One suggestion for implementation in future iterations of a project similar to this one would be to facilitate a face-to-face meeting or a Skype call so that participants could get to know each other prior to getting to work.

In our study, the participants all sent videos to each other to introduce themselves. However, this approach may not go far enough, since a video is not an unscripted conversation. An initial meeting or video call in which everyone gets to talk to each other may help provide an additional layer of connected learning and encourage better relationships in the digital Third Space.

Other suggestions for future implementations are related to timing. Since university classes typically do not meet at the same time as high school classes, real-time collaborative work is difficult. Establishing a set time after class in which groups log on to the site could help participants feel more connected. In addition, high school teachers must be willing to devote part of their class time to working on the project so that their students and the preservice teachers can be in the digital Third Space at the same time. As with any partnership, compromise and mutual give-and-take is essential for success.

This study demonstrates that activities designed with CL principles in a collaborative, file sharing website can provide benefits to all participants. The creation of a digital remix within a digital Third Space is just one way in which participants can collaborate and connect. Other project ideas include the making of videos, digital photographs, collaborative writing, or website creation within the shared space. Teachers and researchers wishing to make use of digital Third Spaces need the support of administrators and stakeholders to implement their projects. It is essential for those experts and supportive adults outside the classroom to allow those within the digital Third Space the freedom to create the environment that best suits their creative efforts. Restrictions, editing, or censure will undermine the intent behind Third Space theory and the CL principles.

Future teachers, in particular, need unrestricted access to students so that they can learn to negotiate their new role on their own. As Gee (2003) noted, most learning takes place within the realm of play and outside the restrictions of school.

While this study provides a starting point for thinking about CL, digital Third Spaces, and their impact on teaching and learning, there is much work left to be done. Teaching within a digital Third Space means revamping the way educators look at learning and undoing some of our teacher-centered practices. Teachers must let students interact with another, and as John Dewey (1922) said in *Democracy and Education*, teachers should "give the pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking; or the intentional noting of connections; learning naturally results" (p. 181).

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