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Re-envisioning Clinical Reading Instruction during a Time of Uncertainty

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ABSTRACT

The article describes a field experience that unexpectedly shifted online, in response to the global pandemic and national shut down, mid-way through the spring 2020 semester. First, the course and its embedded fieldwork is situated within the body of theoretical work that frames the traditional, f2f delivery. Then, the literature on teacher preparation for online instruction, as well as online fieldwork experiences in literacy instruction is reviewed. Through formative assessment survey data and subsequent reflective data, the instructional decisions which undergirded the shift to remote fieldwork are analyzed for their impact on the thinking and learning of the literacy specialist candidates who participated in this shift. Three instructional decisions emerged as most critical to the shift's success and candidates' learning. Findings have implications for the course and the advanced literacy program and are important considerations as we adapt to the educational realities of teaching and learning in an uncertain time.

KEYWORDS

Teacher education; fieldwork; on-line fieldwork; clinical reading instruction

The COVID-19 crisis and the political, economic, and social disruptions it has caused, has fundamentally challenged the traditional context for instructional delivery and learning. In fact, as the nation shut down in early March of 2020, many institutions of higher education and P-12 schools across the country quickly responded by shifting face-to-face (f2f) instruction to remote learning formats. Not only was this shift rife with challenges for an educational system unprepared, but it also highlighted inconsistencies, inadequacies, and inequities across the system, underscoring an urgent call to re-envision skills educators will need for teaching in this time of technological transition (Rice & Deschaine, 2020),

Rice and Deschaine (2020) argue that there is now a sufficient research base for online teacher competencies and an emerging consensus as to the coursework that is necessary to prepare educators for online learning formats. However, they also caution that this research points to a need for a re-envisioning of current teacher education programs, as well as a need for a concerted commitment to embrace new ways of thinking about teaching and learning – a fact that was striking, as teacher educators found themselves at an historic crossroad mid semester, spring 2020, juggling short-term pressures, such as shifting critical field experiences online, against medium and long term uncertainties, such as what future classrooms will look like and what this might mean for responsive teacher education.

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The goal of this article is to describe and discuss a field experience, embedded into coursework in the advanced literacy specialist program, that unexpectedly shifted online, in response to the global pandemic and national shut down, mid-way through the spring 2020 semester. First, the course and its embedded fieldwork will be situated within the body of theoretical work that frames the traditional, f2f delivery. Then, the literature on teacher preparation for online instruction, as well as online fieldwork experiences in literacy instruction will be reviewed, contextualizing instructional decisions made by the instructor as the f2f fieldwork experience shifted online. Next, through formative assessment survey data and subsequent reflective data, the instructional decisions which undergirded the shift to remote fieldwork will be analyzed for their impact on the thinking and learning of the literacy specialist candidates (candidates) who participated in this shift. Finally, implications these findings have for the course, as well as the advanced literacy specialist program will be discussed and are important as we adapt to the educational realities of teaching and learning in an uncertain time.

Theoretical underpinnings and framework of the course

The importance of experiential learning for cultivating the knowledge, skills, and dispositions critical for aspiring teachers is well documented in the literature (Dewey, 1938; Freire, 1970; Glazier & Bean, 2019; Glazier, Bolick, & Stutts, 2017; Kolb, 1984; Kolb & Lewis, 1986; Lee, 2019; Lewis & Williams, 1994). In fact, recognizing its value, the US National Council on Teacher Quality (2020) requires each state to provide teacher candidates with a high-quality clinical experience. For aspiring literacy specialist candidates in New York State, this entails at least 50 clock hours of a college-supervised practicum (New York State Education Department [NYSED], n.d.).

In the advanced literacy program, candidates are readied for their practicum through coursework, learning activities, and field experiences informed by experiential learning theory (Kolb, 1984; Kolb & Lewis, 1986; Peterson, DeCato, & Kolb, 2015). The graduate course discussed in this article, EDU 561 *Literacy for Diverse Young Learners*, includes a fieldwork component where teachers work with a primary age student to evaluate the child's reading abilities, then craft and implement targeted and individualized instruction. This fieldwork is completed during the first hour of the weekly, three-hour class and takes place over the course of ten weeks. The second hour of class is spent in professional reflection, collaboration, and planning, while the third hour focuses on instructional technique presentations by the instructor. In this way, the structure of class time allows candidates to participate in each of the four stages of learning as described by the experiential learning theory: (1) participation in a concrete experience followed by (2) observation of and reflection on that experience which leads to (3) the formation of abstract concepts (analysis) and generalizations (conclusions) which are then (4) used to test a hypothesis in future situations, resulting in new experiences (McLeod, 2017).

Arguably as important as the fieldwork, the second hour of class time has been informed by principles of constructivism (Bruner & Austin, 1986; Vygotsky, 1978; Wells, 2000) and entails professional reflection, collaboration, and planning, all done under the guidance of the instructor. In experiential learning contexts, reflection, supported by guided practice and feedback (Paris & Paris, 2001), provides a foundation for knowledge construction (Conway, 2001) that results in the self-directive process of self-regulation (Boud, 2007).

For adult learners, self-regulated learning strategies undergird habits of lifelong learning as well as the "important capacity to transfer skills, knowledge, and abilities from one domain or setting to another" (Shuy, 2010, p. 1). Thus, the professional collaboration and reflection that occurs immediately following the fieldwork results in knowledge construction, setting the stage for a lifelong habit of reflective practice (McGrath & Bardsley, 2018; Loughran, 2002).

Though this work has traditionally taken place on campus (McGrath & Erwin, 2015; Bardsley & McGrath, 2016; McGrath & Bardsley, 2018), mid-way through the spring 2020 semester, a re-envisioning of the course and the f2f fieldwork was necessary as the nation shut down, the course went online, and we scrambled to continue providing our services to the families and children with whom we worked. At that point in the semester, the candidates had completed their reading evaluations, analyzed their assessment data, formulated individualized instructional goals, and had begun one-on-one tutoring in the clinical setting on campus.

Fortunately, the shutdown and surprising disruption to the fieldwork occurred during an extended spring break. This extra time, as well as observing other institutions of higher education announce shifts to online instruction, allowed time to plan for the inevitable in a mindful and responsive manner. Subsequently, important instructional decisions were made to facilitate a smooth transition from the f2f fieldwork context to online. These included (1) surveying the candidates regarding their perceptions of their competencies with technological knowledge and technology pedagogy, (2) providing responsive scaffolding for the development of technology knowledge and technology pedagogical knowledge that was rooted in the results of the formative survey, and (3) embracing a needs-centric approach to online instructional delivery. To contextualize these decisions, the next section will highlight a review of the available literature on teacher preparation for online instruction and online literacy fieldwork experiences.

Review of the literature

Teacher preparation for online instruction

The circumstances surrounding the world-wide pandemic have highlighted a need for candidates who possess adequate knowledge, skills, and dispositions for effective online teaching (McAllister & Graham, 2016). However, Carpenter et al. (2020) argue that contrary to the stereotypes of young people as being digitally-savvy, research across multiple countries suggests that many prospective candidates lack sufficient technology-related knowledge and skills (Angeli & Valanides, 2009; Ertmer & Ottenbreit-Leftwich, 2010; Gudmundsdottir & Hatlevik, 2018; Haydn, 2014) and typically do not have opportunities to develop these skills during their coursework or fieldwork experiences (Kennedy & Archambault, 2012; Rice & Deschaine, 2020). In fact, in a survey study conducted by Archambault et al. (2016), only about 4%, or 15 teacher education programs, offered fieldwork experiences in K-12 online settings. Carpenter et al. (2020) argue that this is problematic because without opportunities for practice, or contact time with various digital tools, candidates often feel ill-equipped to use technology (Chien, Chang, Yeh, & Chang, 2012; Tondeur et al., 2012). Even when technology is integrated into teacher education programs, Carpenter et al. (2020) argue that the types of technologies and experiences

available may not prepare candidates for using technology in transformative ways (Wetzel, Buss, Foulger, & Lindsey, 2014). This is concerning in light of the challenges facing today's educators, who are charged with teaching students the knowledge and skills they will need for productive citizenship in the digital age (Rice & Deschaine, 2020).

Arguably, effective online teaching requires different knowledge, skills, and dispositions than traditional teaching (Pulham & Graham, 2018). Ertmer and Ottenbreit-Leftwich (2010) posit that to achieve the kinds of technology competencies required for 21st-century teaching and learning (Lai, 2008; Law, 2008; Thomas & Knezek, 2008), we need to help aspiring candidates understand how to use technology to facilitate meaningful learning. This entails a rethinking of the types of knowledge, skills, and dispositions necessary for not only pedagogical content knowledge competence (PCK) (Shulman, 1986, 1987), but technology content knowledge (TCK) and technological pedagogical knowledge (TPK) (Koehler et al., 2013; Mishra, 2019).

According to Koehler et al. (2013) the TPACK framework builds on Lee Shulman's (1986, 1987) construct of pedagogical content knowledge (PCK) to include technology knowledge and explains how candidates' understanding of educational technologies and PCK interact with one another for effective teaching with technology. In this model, there are three main components of candidates' knowledge: content, pedagogy, and technology. The TPACK framework conceptualizes the interactions between and among these bodies of knowledge, represented as PCK (pedagogical content knowledge),TCK (technological content knowledge), TPK (technological pedagogical knowledge), and TPACK (technology, pedagogy, and content knowledge). This framework not only acknowledges the complexity of today's classroom contexts (Leinhardt & Greeno, 1986), but that effective teaching depends on flexible access to integrated knowledge from different domains (Glaser, 1984; Putnam & Borko, 2000; Shulman, 1986, 1987), including knowledge of student thinking and learning, knowledge of subject matter, and more recently, knowledge of technology and technology pedagogy (Koehler et al., 2013)

Over ten years ago, DiPietro, Ferdig, Black, and Preston (2008) began outlining the skills necessary for effective online teaching, including: (1) explaining information or giving feedback in more than one medium, (2) monitoring student interaction in spaces like discussion boards, especially when students post disturbing information (3) cultivating relationships with student using online and digital communications; (4) acquiring skills in using technologies for record keeping and assessment, as well as instruction; (5) fostering student motivation through timely feedback and addressing of student questions (6) modeling interest in learning and appreciation for content without using traditional strategies like lectures. More recently, Pulham and Graham (2018) reviewed the literature on online learning and generated a list of critical teaching skills including: management, pedagogy, assessment, instructional design, technology, improvement, and dispositions (Rice & Deschaine, 2020).

The highlighted research undergirds the development of professional standards that address technology pedagogy knowledge including the *National Standards for Quality Online Teaching 2009*, (Pape & Wicks, 2009) developed by Quality Matters and the Virtual Learning Leadership Alliance, the *Essential Principles for High-quality Online Teaching*, created by the Southern Regional Education Board [SREB], (SREB, 2003), *The Guide to Teaching Online Courses*, from the National Education Association [NEA], (NEA, 2006), the *ISTE Standards for Educators*, from the International Society for Technology in

Education [ISTE], (ISTE, 2021), and *The Teacher Educator Technology Competencies*, from the Society of Information Technology and Teacher Education [SITE], (SITE, 2021). The Department of Education (2020) has also weighed in, recommending the development of a teaching force skilled in online and blended instruction so that schools and districts are positioned to use technology to promote equity and opportunity for all students.

However, according to Rice and Deschaine (2020), though teacher educators are aware of professional standards and specific skills necessary for teaching online, improving access to teacher preparation for online learning is difficult because (1) despite a research base, there lacks a consensus on what topics should be covered (McAllister & Graham, 2016), and (2) teacher education "remains tethered to traditional enrollment models, standards for competences, field experience work, and technology implementation frameworks that are not supportive structures for learning to teach online" (p. 117).

Online fieldwork experiences in literacy instruction

Despite these hurdles, the field of literacy has been actively exploring high quality, online literacy field experiences for preservice and advanced teacher candidates that yield powerful benefits not only for aspiring candidates but for the students with whom they work. For example, Houge and Geier (2009) found that video conferencing improved motivation for struggling readers. Johnson, Maring, Doty, and Fickle (2006) found increases in reading fluency when two preservice candidates were paired with a first grader and used video conferencing as well as a tutorial guide.

In a study utilizing educational software to supplement the classroom instruction of 4th grade students from a high minority, high poverty school in Philadelphia, Vasquez, Forbush, Mason, Lockwood, and Gleed (2011) paired their undergraduate students from Utah State University to provide live, systematic, comprehensive, and explicit online reading tutoring. Not only did their 4th grade students make gains in reading fluency, but the researchers illuminated important implications for this online tutoring model noting (1) broader access to and flexibility in reading tutoring, (2) online assessment capabilities, (3) one-on-one, high paced instruction with intensive practice and error correction, (4) the ability for school-age students to build relationships around reading with college-aged students, and, in turn, pre-service candidates gain real world teaching experience, (5) less miscellaneous costs associated with face-to-face tutoring (e.g., automobile fuel, or babysitter fees) and, (6) increased parents' and candidates' involvement in reading interventions through provision of weekly updates of student progress.

Houge and Geier (2009) also examined one-on-one tutoring via videoconferencing. In their study, preservice candidates delivered literacy instruction to adolescent participants who were geographically distributed and who might have otherwise found it challenging or impossible to attend tutoring in a f2f setting. During each instructional session, pairs used two copies of the same contemporary Young Adult Literature, and followed an instructional framework consisting of fluency and vocabulary instruction, guided reading with direct and explicit comprehension instruction, writing activities, and read-alouds. This model yielded improved reading and spelling scores.

Research on online field experiences in literacy also points to benefits for aspiring candidates. For example, in their 2010 study, Kent and Simpson (2010) found that interactive video conference (IVC) provided preservice candidates (1) with a model of exemplary

reading instruction, and (2) enabled these new candidates to feel more competent and confident in their abilities to teach reading as well as their abilities to meet the many challenges inherent in teaching today. Kurz, Llama, and Savenye (2005) found that video case studies increased pre-service candidates' motivation and supported their overall learning and growth. Sharpe et al. (2000) studied the utilization of videoconferencing for weekly conferences between university supervisors and pre-service candidates in the field. They found that both the supervisor and candidates cited the benefit of reduced travel time and that pre-service candidates' reflections were much improved as compared to the reflections of candidates who did not participate in the videoconferences.

More recently, Williams, Hall, Eastham, Hedrick, and Boller (2015) described an online field experience where literacy candidates, enrolled in their literacy practicum, utilized interactive video conferencing for their work with elementary-age students from an urban public charter school. The instructional framework used by the literacy candidates included a selection of high-interest, nonfiction e-books and focused lessons on the expository reading skills described in the CCSS for Reading. Participants engaged in authentic discussions about informational texts (Allington, 2013) interacted with the literacy candidates as "book buddies," while simultaneously learning comprehension strategies. According to Williams et al. (2015), the virtual field experiences allowed preservice and in-service candidates to receive immediate feedback from the instructor as well as embrace the idea of integrating technology into literacy instruction. Both candidates and students benefited from the opportunity to personally connect and further engage in text (Coffey, 2012; Day & Kroon, 2010; Houge & Geier, 2009).

In sum, findings from the reviewed studies suggest that online fieldwork experiences in literacy provide unique benefits for both students and aspiring candidates.

The purpose of this study is to add to the growing literature on remote contexts for literacy fieldwork experiences. In the next sections, the process of the shift to online fieldwork and the impact this had on the candidates will be described through the analysis of two forms of data. The first form of data includes a formative assessment survey, which was developed to probe candidates' current knowledge of technology (TCK) and knowledge of technology pedagogy (TPK). The results from the survey were used to underpin a series of instructional decisions made by the instructor to support candidates in their current understandings, strengths, and needs relative to their TCK and TPK and to help them successfully shift to remote learning and teaching. The impact these instructional decisions had on the candidates will be presented through analysis of the second form of data that informs this study and includes the candidates' end-of-the-semester reflections on their experience. These reflective data provide retrospective insight and feedback on the professor's instructional decisions as well as shed light on the impact those instructional decisions had on the candidates' perceptions of their learning. Together, the findings from these data result in implications for the course and the advanced literacy program.

Methods

Participants

Thirteen candidates participated in EDU 561 *Literacy for Diverse Young Learners* and its embedded fieldwork. Approval to conduct the study was obtained from the university's

Institutional Review Board (IRB) and all candidates agreed to participate. As part of their consent, candidates were assured confidentiality, thus pseudonyms have been used. All participants identified as white, female, and were between the ages of 21–25. All had obtained at least one initial BLINDED State teaching certification, while most held multiple certifications. Areas of certification included: Elementary Education 1–6; Early Childhood birth-grade 2, 7–12 English, 7–12 Social Studies, and Special Education. While completing their graduate studies, three of the thirteen were working as classroom teachers, two had graduate assistantships in the College of Education, and the others were working as teaching assistants or full-time substitute teachers.

Data

Formative Assessment Survey of TCK and TPK

Though the instructor had some ideas for how remote remedial reading instruction might be done, in the spirit of the course, which starts with assessment to ascertain reading strengths and needs, it was decided to first survey what the candidates knew about instructional technology and remote instructional delivery. To do this, a six-question survey was created using Google Surveys (see appendix). Questions were meant to probe (1) experience/familiarity with online educational platforms, software, and apps, (2) suggestions regarding how candidates could best support their students during this shift, (3) suggestions for how the instructor could best support the candidates, and (4) feelings regarding juggling different aspects of their life including the demands of full time teaching or subbing, the demands of graduate school, and issues related to the global pandemic such as health and safety.

Two reminders to participate in the survey were sent out with a heartfelt message from the instructor that their honest feedback would be necessary for moving forward with shifting their fieldwork to an online context. To promote the candidates to give an honest assessment of their current skills, knowledge about technology, and technology pedagogy, as well as their feelings about the shift to remote learning and instruction, the survey was designed such that responses were anonymous. All thirteen candidates participated in the survey.

End-of-the-semester reflections

Reflective data was collected at the end of the course, in the form of a four–page written reflection, to probe the impact the course and fieldwork shift to remote learning and teaching had on the candidates' understandings of early literacy assessment and instruction (PCK), knowledge of technology (TCK), and competence with technological pedagogy (TPK). candidates were specifically asked to reflect upon the following questions: *How has your understanding of early literacy assessment and instruction, knowledge of technology, and technological pedagogy evolved as a result of the shift of your fieldwork from f2f instructional delivery to remote? What "lessons" most resonate with you?"* Thus, these exercises in reflection provide a window into how participants evolved in their understanding of TPACK and provide implications for the course and advanced literacy program.

Reflective data were analyzed by the researcher, who is also the instructor, using the constant comparative method (Glaser & Strauss, 1967; Strauss & Corbin, 1990) including open, axial, and selective coding procedures. The interpretive process was abductive (Agar,

1996) in that the researcher moved iteratively through cycles of inductive and deductive analysis. During all levels, coding was interpreted through the lens of the professor and informed by theoretical and pedagogical principles, as well as the reflective questions asked of the participants.

During the first level of coding, open coding, raw data was reviewed via line, sentence, and paragraph. Key phrases were underlined and substantive labels, as well as in vivo codes, were written in the margins. Through the constant comparison of open codes, similar codes were further defined and relationships between those evolved.

During the second level of coding, axial coding, categorical relationships were identified relative to the reflective questions: *How has your understanding of early literacy assessment and instruction, knowledge of technology, and technological pedagogy evolved as a result of the shift of your fieldwork from f2f instructional delivery to remote? What "lessons" most resonate with you?* Subsequently, core concepts that described these relationships were developed.

During the final phase of coding, selective coding, axial codes were connected and consolidated. Categorical relationships were compared and validated. As each theme was solidified, and no new insights were obtained, it was clear that theoretical saturation, as described by Bowen (2008), was achieved.

As a verification procedure, member checking was employed. Participants were invited to take part in this process in early July 2020. As part of the invitation, they were informed that they would be asked to review results for accuracy and "resonance with their experience" (Birt, Scott, Cavers, Campbell, & Walter, 2016, p. 1802). In this way, they were given "an opportunity to consider whether any of the experiences or perceptions of others applied to them," (Harvey, 2015, p. 30), thus adding to the credibility of the results of this study. Eight participants agreed to participate in this process.

Feedback from the member checking process indicates that the findings align with participants' perceptions of the experience; thus, providing confirmation of the themes. Three illustrative comments include: "The results accurately capture my experience"; "It was a wild ride, but this definitely describes my experience!"; "I'm glad it's over, but I really did learn so much from having no option but to shift to online instruction. I think the results capture not just the learning, but the emotion that surrounded the entire situation and experience. Thank you for writing about this. Technology needs to be better addressed in teacher preparation."

In sum, the iterative process of coding and analyzing data, interpreted through the lens of the instructor, and verified through member checking, resulted in several themes. These will be presented and discussed in the following sections.

Findings

Formative Assessment Survey

Figure 1 displays results from question one of the Formative Assessment Survey and indicates that, in general, these candidates, who are all in their early to mid-twenties, were unfamiliar and inexperienced with educational platforms, software, and apps. Results from question two indicated that none of them had experience with video conferencing via Zoom or GoogleHangouts. Results from questions four through six indicated

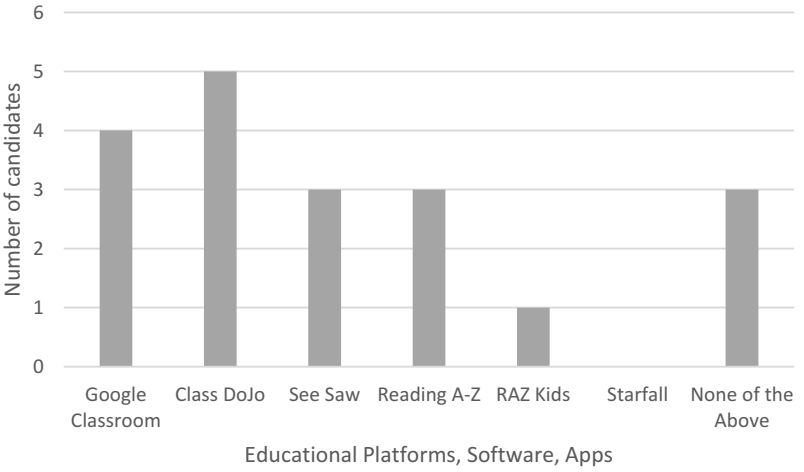

Figure 1. Candidates' familiarity with educational platforms, software, and apps.

that candidates felt extremely unconfident in their abilities to support their students in a remote format and were not sure what they even needed in the form of support from their professor. As well, they were reeling from the anxieties surrounding the uncertainties of the pandemic including their own health and safety, juggling the demands of their teaching positions with the demands of their fieldwork, and were worried about how the families of their students would manage online schoolwork with online remedial literacy instruction.

In sum, these candidates were incredibly unprepared for the challenges, demands, and expectations posed by the global pandemic and the resulting shift to remote learning and teaching. These realities necessitated a commitment from the instructor to tweak the course, through a series of instructional decisions, in ways that would best support candidates in their development of new knowledge and skills that were beyond initial course and field-work expectations.

Reflective data

Through the iterative process of coding and analyzing the candidates' end-of the semester reflections, three themes emerged relative to the instructional decisions made by the professor. including: (1) *create and communicate two new student learning objectives (SLOs) focused on the development of technology knowledge and technology knowledge pedagogy*, (2) *provide responsive scaffolding for the development of technology knowledge and technology pedagogical knowledge*, and (3) *embrace a needs-centric approach to online instructional delivery*. These themes will be presented in the next section.

Instructional decision 1: create and communicate new student learning objectives

The results from the Formative Assessment Survey indicated a need to create the conditions necessary for candidates to embrace a growth mind-set (Dweck, 2006), feel safe in their learning, and for the instructor to respond to the realities of the candidates' familiarity and abilities with technology and technology pedagogy. One of the first things the professor did in creating the conditions for a growth mind-set was to consider and develop new student

learning objectives (SLOs) that were specific to educational technology and remote instructional techniques. These included (1) *candidates will become familiar with a variety of technology options to support remedial reading instruction* (2) *candidates will become familiar with a variety of instructional techniques to support remote learning for p-12 students.*

Importantly, the first communication from the professor to the candidates, after the Formative Assessment Survey had been administered, addressed the addition of the SLOs. This sent a clear message that the candidates were going to be met and supported in relation to their current abilities, strengths, and needs. To this end, Kimberly remarked:

> I honestly didn't even know where to begin with remote instruction. This was NEVER (caps in the original) an expectation in any fieldwork experience I ever had. In the beginning, I was angry and stressed! But, when I realized the technology aspect was something you were going to support us with and learn with us, I relaxed and followed your lead . . . What I have learned is that I need to be patient and flexible with myself when it comes to completely new experiences . . . I have always been a perfectionist. This was the first time in my academic career that I felt perfection wasn't even achievable. Now that it's over, I can honestly say that though it was scary and unfamiliar, it has been one of the best learning experiences I have ever had! Thank you for supporting us and caring so much about our learning. The way you handled us has inspired me to be more patient and flexible with my students.

In addition to the new SLOs, the instructor had to clearly communicate that this learning process would entail *both* successes and failures; thus, there would need to be a commitment to learn together, celebrate successes, and problem-solve for solutions when faced with failures. In this way, the candidates could feel safe in this new terrain and trust that they were going to be supported by their professor in the new course expectations. To this end, Emily commented:

> In the beginning, I was incredibly stressed (about the shift to remote fieldwork) to the point of getting physically ill. However, through this experience I have learned to be patient, to take a "mindful moment" and to remember that there is a way to get through even the most challenging times. I have learned to be collaborative and rely on friends and colleagues to pick you up when stressed . . . . I honestly think we, as a class cohort, learned so much more from one another than we would have if we had finished out the class in our own cubicles or tables.

In the end, the value of professional collaboration as well as the importance of collegial support were arguably among the most useful lessons learned.

Instructional decision 2: provide responsive scaffolding for development of technology knowledge and technology pedagogy

Setting the conditions necessary for the candidates to feel safe in this new experience also entailed thoughtful scaffolding of the candidates' current TCK and TPK. To do this, the professor created and sent to the candidates, a sample instructional session, which followed the instructional plan template the candidates had been using all along. In an effort to allow for flexible delivery (i.e. synchronous or asynchronous), this plan utilized voice-recorded PowerPoint slides and included (1) a rereading of the previously read text, (2) word identification instruction (including sight words and phonics), (3) instruction of a new text, and (4) writing a sentence about the text, (5) word work with the written sentence, (6) sight word review game. This model proved to be instrumental in

supporting candidates and building their confidence that online instruction was doable. In fact, Alicia remarked:

> I could not imagine delivering online instruction until I saw the example lesson. Once I saw how simple and effective it could be, I felt a lot better about the whole situation.

In addition to modeling a complete lesson, the professor refocused the instructional technique presentations that take place during the third hour of class. Instead of modeling techniques that are typically done in a f2f context, the professor focused on educational software and apps. For example, the candidates were using the Words Their Way games and sorts (see Bear, Invernizzi, Templeton, & Johnston, 2020) for the phonics and word work component of their f2f lessons; however, after discussing the logistical problems that were coming up during the synchronous instructional sessions and specifically, the waste of time spent waiting for the child to cut up the words to sort, the instructor used the third hour of class to explore Starfall®, a website developed by the Starfall Education Foundation, that provides audio-visually interactive games emphasizing phonemic awareness, systematic sequential phonics, and common sight words (see Starfall.com, 2021). Several candidates ended up using Starfall® as a remote, instructional alternative to the cut-up word sorts they had been using from Words Their Way. In fact, Elizabeth noted:

> I know not everyone ended up using Starfall, but I did, and I ended up loving it! Thanks for introducing it as an option for us. It worked out so much better for (Stella) than trying to keep track of the WTW (Words Their Way) words remotely. That was a nightmare :) (Smiley face in the original)

Peer scaffolding also enhanced learning during the shift to remote learning. Weekly, candidates shared their instructional sessions on the university's learning management system (LMS) discussion board. This allowed classmates to view each other's work and learn from one another. Prior to the shift to remote fieldwork, the candidates had talked about their lessons during large-group debriefing sessions; however, they never actually shared them on a discussion board. Lauren noted:

> Yes, we debriefed after the tutoring sessions, but we were all at different points and not seeing everyone's lessons like we could in the discussion space. I think this experience opened our minds to the acceptance of new ideas and adapting to changes. We ended up learning a lot from each other that I don't think would have happened during our f2f debriefings.

Instructional decision 3: embrace a needs-centric approach to online instructional delivery

Next, the instructor met with the candidates to develop a plan for the remainder of the semester. During the video conference, the professor modeled synchronous instruction through Zoom, as some of the candidates had expressed that they thought the families of their children might prefer this mode. As well, considerations were discussed for ensuring a successful experience. For example, candidates discussed the fact that many of their students' families might lack access to instructional materials, technological devices, and/or internet service. From this discussion, care packages that included school supplies were put together and hand-delivered to any family who needed one. As well, iPads, which were purchased through the generosity of gifts to the BLINDED, were also loaned out to any family who lacked a device and Spectrum provided free internet during the national

shutdown. Families deeply appreciated our efforts. In fact, Caitlyn shared in her reflection, a remark made to her by her student's mother, who is also a practicing teacher:

> Kami's mother was so touched by the care package that you (the professor) personally delivered! She appreciated the symbolic gesture of solidarity and expressed to me that the connection really helped Kami and the whole family emotionally during a difficult time.

In the end, the families had the necessary technology, devices, and instructional materials needed for finishing their work with us.

Once the families and candidates were equipped with the necessary materials, devices, and technology, flexible, workable instruction began that was doable for both candidates and families. Because there were disparities in WiFi access, this included a choice in instructional delivery for candidates and their families: (1) synchronous instruction, during which parents often sat side-by-side with their children to participate in the lessons or (2) asynchronous instruction, which enabled children to work independently at times that fit their families' schedules. This flexibility was crucial in light of the factors both families and candidates were juggling. To this end, Liz noted:

> Reflecting on this semester's experiences with distance learning for the course, I felt that overall, the transition from on-campus to online tutorial sessions was very smooth. Highlights of this transition included teacher choice of method of instruction, and the freedom and flexibility of reading tutorial scope/sequence. This flexibility allowed for increased creativity within the instructional time with each student.

In reflecting on the experience and in reviewing feedback from candidates and parents, the mode of instructional delivery (i.e. synchronous vs. asynchronous) did not matter as much as a match in preferences between families and their candidate. In other words, there were examples of high satisfaction expressed by families who participated in synchronous instruction as well as asynchronous instruction. In the one example of dissatisfaction, there was a mismatch between the family's preference for synchronous instruction and the candidate's preference for asynchronous instruction. In this case, the candidate had expressed concerns regarding the privacy infringements possible in video conferencing that had been highlighted in the media. Because the instructor felt it important to honor these reservations, the candidate was not asked to accommodate the family's preference; however, the instructor reached out to the family to offer further support to make the asynchronous instruction work. Ultimately, the communication between the parent and candidate broke down and asynchronous instruction just did not work for this family, a situation that has been noted as we move forward in an uncertain time. Grace's perspective is heartbreaking and clearly illustrates one of the challenges faced in the shift to remote teaching and learning. She noted:

> The method as to which I was providing instruction to my student was never presented as concern by the parent. It was very disappointing to hear because of the amount of time and hard work I had put into each lesson. Had the parent communicated with me throughout the program the request (from the parent) to redo my lessons through video conferencing may not have been as disappointing. I do not believe (Megan's) mother tried any of the solutions I spent hours to find. The lack of communication from the parent until the last week of the program seemed disrespectful and uncurtious (sic).

The lesson learned is that open, honest communication is critical, but not always easy. In this particular situation, the parent had become extremely frustrated trying to open the asynchronous lessons Grace had spent an inordinate amount of time developing, while also trying to juggle three primary age children and an infant. With each heartfelt suggestion Grace made, the parent became more frustrated. Obviously there were many factors at play, but moving forward, these factors will need to be thoughtfully considered so as to ensure a positive experience for all. One solution is to make certain the instructional delivery preferences match between the family and candidate.

Though Grace's experience with remote learning and instruction was challenging, in the end, she noted:

> This experience has taught me a significant amount about myself. I have learned that I am optimistic, hard working (sic), and resilient . . . This course has provided an abundance of information, knowledge, and experiences that have allowed me to grow as a teacher. This experience has taught me that determination, positivity, and flexibility are important qualities to have as a teacher. I will be able to take the knowledge and strategies I have learned through collaboration with my peers and individual research and apply them to my future classroom to benefit my students and help them be successful.

Finally, an unexpected outcome of the shift to remote instruction was noted by several candidates who chose to deliver their instruction synchronously. They reflected that their student's parent(s) had appreciated being able to "listen in" on their child's instruction and that doing so enabled the parent(s) to learn strategies for supporting their child's reading development at home. Jessica's reflection is illustrative. She notes:

> I think that my experience was so successful because of the support from Jimmy's mom and the new ability I had found to tailor lessons for Jimmy. The fact that Jimmy's mom was so supportive and excited about the idea of synchronous learning, in theory and in its execution, made this a success because I felt welcome into their home and greatly appreciated. And, the fact that Jimmy's mom has learned a few strategies from me to help him at home has made this so worthwhile!"

Some parents also noted that, with this extra support, their child was able to make significant progress. The lesson here is the tremendous potential this type of collaboration between families and candidates might have for supporting the reading development of young readers.

Discussion

Data reveal that though the mid-semester shift from f2f to an online context for fieldwork was rife with challenges and candidates were unprepared for the shift, three instructional decisions emerged as important to not only the success of the shift, but to candidates' perceptions of their learning. These results corroborate research in teacher education and online literacy fieldwork experiences.

First, results from the Formative Assessment Survey revealed that candidates were unfamiliar and inexperienced with educational platforms, software, and apps, had no experience with video conferencing tools such as Zoom or GoogleHangouts, and were extremely unconfident in their abilities to support their students in a remote format. These results corroborate research across multiple countries suggesting that the participants of this study

are not unlike other prospective candidates world-wide, who feel insufficiently prepared with technology-related knowledge and skills (Angeli & Valanides, 2009; Ertmer & Ottenbreit-Leftwich, 2010; Gudmundsdottir & Hatlevik, 2018; Haydn, 2014). Further, candidates world-wide report that they typically do not have opportunities to develop these skills during their coursework or fieldwork experiences (Kennedy & Archambault, 2012; Rice & Deschaine, 2020). Likewise, the participants of this study revealed few, if any, opportunities during their teacher preparation to develop knowledge, skills, and dispositions related to technology content knowledge and technology pedagogy knowledge. The addition of two new student learning objectives to the course that were specific to technology content knowledge and technology pedagogy knowledge proved to be an important instructional decision.

Secondly, the results of this study underscore the importance of not only considering the knowledge, skills, and dispositions necessary to achieve the kinds of technology competencies required for 21st-century teaching and learning (Lai, 2008; Law, 2008; Thomas & Knezek, 2008), but to responsively scaffold learning that addresses the development of pedagogical content knowledge competence (PCK) (Shulman, 1986, 1987), technology content knowledge (TCK) and technological pedagogical knowledge (TPK) (Koehler et al., 2013). The formative survey done at the on-set of the shift to online fieldwork proved crucial to understanding candidates' perceptions of their competencies within these domains. It also set the foundation for responsive and effective scaffolding in the forms of modeling what the online literacy lesson could look like, as well as guided practice with educational software and apps.

Embracing a needs-centered approach to online instructional delivery is not an issue addressed in the literature reviewed for this study; however, it proved to be a crucial instructional decision for myriad reasons, not the least of which were circumstances surrounding the shift to online instructional delivery. Had the fieldwork experience been organized from the beginning of the semester to be completed in an online format, some of the issues we ran into (e.g. WiFi and technological device access) could have been addressed long before our work with students began. Further, there would have also been time to survey preferences for synchronous or asynchronous instruction and to match candidates and families accordingly. Alternatively, decisions could have been made, prior to the beginning of the semester, to provide instruction in one format or another, communicating those decisions to families upon intake of their children.

Importantly, embracing a needs-centric approach to online fieldwork did not guarantee a problem-free experience. This issue was poignantly illustrated in the case of the candidate concerned about privacy and therefor, chose asynchronous instructional delivery. In the end, asynchronous instruction just did not work for the mother of three young children and an infant, leaving the candidate feeling frustrated and defeated.

Finally, the results of this study corroborate findings from other research on high quality, online literacy field experiences, that suggest such opportunities yield powerful benefits not only for aspiring candidates but for the students and families with whom they work. Indeed, the results from this study suggest that candidates benefitted from the online fieldwork experience noting valuable lessons learned. Candidates also reported important benefits for families citing how appreciative parents were, regardless of the instructional mode, to sit side-by-side with their child and watch the magic of the lesson unfold, while picking up tips for how to reinforce literacy in the home.

Moving forward in a time of uncertainty: implications for the course and the advanced literacy program

As we move forward in a time of uncertainty, the results from this study present implications for both the course and the advanced literacy program, as well for teacher educators and teacher preparation programs. These implications will be addressed as potentialities.

The first potentiality regards a solution for student absence, which has been a long-standing problem for the BLINDED, as some of our families face factors that make getting their child to the weekly sessions challenging. For example, typical reasons students do not show up for instruction include, an old car broke down, a parent cannot get out of work on time, or someone in the family falls ill. Though we are understanding of these situations, student absence makes it difficult for candidates to benefit from the rich learning opportunities of hands-on learning and the children also miss out on critical learning opportunities. As we move forward, student absence can become less of a barrier, as f2f instruction can be easily shifted online, especially if technology knowledge and technology pedagogy become course student learning objectives and expectations.

A second potentiality revealed from this study is the tremendous collaborative opportunities for candidates and families to support literacy development. The research is clear. Family involvement is important for children's achievement (see Saracho, 2017). The results of this study suggest candidates can be instrumental in facilitating family involvement in literacy development. Though this was not a central focus of the study, the feedback from parents shared by the candidates with regard to better understanding how to reinforce literacy instruction at home, has exciting implications for the course. For example, a new course project is being developed to foster intentional parent/candidate collaboration.

A third potentiality addresses some of the inadequacies, inconsistencies, and inequities we have faced with holding this fieldwork experience on the university campus. The children who have been able to participate have families who (1) have transportation, (2) have the social capital (Bourdieu, 1984) to be able to navigate the registration process, park on campus, and find the building, (3) live within reasonable distance for the drive to campus to be doable. Myriad family factors can impede a child from participation in our programs on campus. The ability to offer remote instruction can quite possibly provide an antidote to the tensions we have faced in our efforts to advance the university's mission of service to the poor and marginalized.

A fourth potentiality regards addressing some of inadequacies and inequities across the educational system highlighted by the pandemic and underscored by the results of this study. To do this, teacher educators and teacher preparation programs will need to re-envision the knowledge, skills, and dispositions candidates must embody for effective teaching in this time of technological transition (Rice & Deschaine, 2020). Simply, educators need not only to be competent in their content knowledge, but also be knowledgeable in technology and technology pedagogy, and to be able to teach fluidly in both f2f and remote contexts. There are great potentials for these issues to be addressed and embedded into our professional standards and to be considered in future curriculum development. Additionally, and perhaps most importantly, time to nurture these new skills and opportunities to practice them must be embedded into fieldwork experiences that intentionally address these needs.

This work will not be easy, nor will it be without its challenges. For example, as revealed through the results of this study, we faced challenges with unequal access to technological devices and WiFi across both candidates and the children and families with whom we worked. New York State has begun addressing the inequities with WiFi access, providing low-cost service to low-income residents; however, there are still problems with WiFi access for people who live in rural areas and this disparity in access continues to affect the quality of instruction for children and candidates who live in rural areas.

With regard to inequities in access to technological devices, we have done our best to share devices purchased though grant monies; however, our current capabilities do not meet the current need. Thus, we still have children participating in our programs who work from their parent's phone. Not surprisingly, large disparities exist regarding instructional effectiveness in these situations.

It is through these specific challenges that we realize that there is much more work to be done to equitably serve our community and though we realize this work will not be easy, we recognize that this is a dynamic time, filled with opportunity and the potential for re-thinking program curriculum and embedded fieldwork experiences. It may also be timely to re-visit an idea articulated by Pinnell and Fountas (2017): "Children's progress is limited only by our own limitations in teaching them" (p. 517). The pandemic has revealed an urgency for the field to re-envision what effective instruction looks like, so that our limitations may not affect the growth and development of our precious youth.

Conclusions

It seems appropriate to echo the words of one of the member checkers: The spring semester 2020 was, indeed, "a wild ride." However, this study suggests rich potentialities for the course, future program development and the field and that efforts toward these ends would be well spent in addressing and cultivating technology content knowledge and technology pedagogy knowledge for candidates.

As a final thought, though the circumstances surrounding the world-wide pandemic have been challenging and often filled with sadness, there have been pockets of hope and pockets of human goodness. The candidates who participated in this study are an example of this. They could have bucked the shift to online fieldwork. Indeed, this was not a part of the course they signed up for. However, they were invested in their students and truly wanted to make a difference in their lives. The heart and effort that they put into their online instruction speaks volumes about what they bring to the field. They are an inspiration.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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