Preparing Teachers During a Pandemic:

Virtual Practicum in an Undergraduate Literacy Course

Melissa Summer Wells

University of Mary Washington

Abstract

High-quality field-based experiences are at the core of teacher preparation programs; however, the COVID-19 pandemic severely limited access to such placements for pre-service teachers. This descriptive study examined how virtual tutoring in a summer-semester intermediate literacy course impacted both pre-service teachers and students served. Pre-service teachers worked in dyad pairs to plan and implement reading and writing instruction for a student in the local community in grades three through six using video conferencing platforms. Findings indicated virtual tutoring led to pre-service teachers feeling prepared to work with students in grades 3-6 in one-on-one, small group, and whole-class settings, along with feeling prepared to locate texts for this age group. Tutees felt they learned more and were more excited about reading in virtual tutoring than in their regular school experience. Both groups indicated successes and challenges during the experience.

Keywords: clinical experience; virtual practicum; teacher education

Field-based experience is central to any high-quality teacher education program (American Association of Colleges for Teacher Education, 2018); however, the COVID-19 pandemic challenged traditional placements of pre-service teachers in classrooms. Suddenly, schools had to close buildings or limit external guests. Furthermore, schools were wholly focused on adjusting their own instruction and services with minimal capacity left to mentor future teachers, especially those early in their preparation. Despite these limitations, teacher preparation programs were still responsible for offering meaningful clinical experiences.

To explore alternatives to in-school field-based experiences, I crafted a virtual tutoring experience for students in my intermediate literacy course in the summer of 2020. I wanted my pre-service teachers to experience working with actual student readers, aligning with advice I

received from literacy researcher Gordon Wells during a video call in my doctoral work: he suggested if pre-service teachers could meet the needs of one student, then they could meet the needs of a small group, and finally, they could meet the needs of their whole class (personal correspondence, 2012). In this descriptive study, I used a mixed method design to investigate the research question: How does virtual tutoring impact both pre-service teachers and students they serve?

Literature Review

To gain a deeper understanding of the potential impacts of a virtual practicum experience in my intermediate literacy course, I reviewed literature exploring (1) practicum and teacher preparation programs, (2) literacy-focused practicum experiences, and (3) practicum in virtual spaces.

Practicum and Teacher Preparation Programs

High-quality, field-based practicum experiences provide learning opportunities foundational to future teachers' pedagogy that coursework alone cannot replicate (International Literacy Association & National Council of Teachers of English, 2017; Risko et al., 2008; Sailors et al., 2004). Many teacher education programs include university-delivered coursework alongside elements of fieldwork, with placements in local schools (AACTE, 2018). Without careful planning, coursework and fieldwork can feel disjointed and unrelated (Darling-Hammond, 2010); therefore, careful planning for meaningful integration of coursework and fieldwork is at the heart of a high-quality teacher preparation program (AACTE, 2018). Impactful field-based experiences allow pre-service teachers to not only observe, but also to practice pedagogical skills with ample opportunities for clinical coaching from expert mentor teachers and university instructors (AACTE, 2018).

Literacy-Focused Practicum Experiences

The International Literacy Association (ILA) and the National Council of Teachers of English (NCTE) (2017) reviewed research focused on preparing literacy teachers to name key elements of high-quality programs. Four critical quality indicators included knowledge development, application of knowledge within authentic contexts, ongoing teacher development, and ongoing assessments. Specifically, the second quality indicator focused on specific necessary elements of field experiences, such as prolonged engagement and explicit guidance and mentoring; focused field experiences; and engagement with culturally and linguistically diverse students and families. Risko and Reid (2019) described this element as "authentic practice that is extensive, coherent with program content and goals, and well mentored" (p. 424).

Sailors et al. (2004) studied the field experience features of eight undergraduate teacher preparation programs that the ILA identified as high-quality preparers of future reading teachers. Common features across these programs included (1) focusing on developing pre-service teachers' reflection skills; (2) offering field experiences in a variety of contexts—different grades, backgrounds, and instructional groupings—and with appropriate scaffolding, based on careful course and field experience sequencing and field-based feedback from a more "knowledgeable other" (p. 348), such as classroom mentor teachers and/or university faculty members; and (3) tutoring struggling readers in one-on-one settings, either in classrooms or university reading clinics. All eight of the high-quality programs studied did provide these one-on-one tutoring experiences, with direct supervision from either a classroom teacher or the university instructor.

Nelson, Papola-Ellis, and Giatsou (2019) described the outcomes of fieldwork in a literacy methods course. The course involved 95 hours of fieldwork over a 12-week period, with

the coursework delivered at the field placement school. Researchers noticed pre-service teachers developed deep understandings of literacy instruction, an ability to authentically differentiate their literacy instruction, responsive "in-the-moment" teaching skills, and confidence as future literacy teachers.

Hoffman et al. (2019) reviewed 62 studies published between 2000 and 2017 examining literacy tutoring and mentoring as part of pre-service teacher preparation programs. Trends emerged in four overarching areas. Regarding structural or design features, university coursework often occurred alongside a semester-long tutoring assignment, mostly reading-focused and often completed with small groups or individual tutoring at local schools. Additional structural features included coaching support for pre-service teachers during the tutoring experience. The second area addressed the learning and growth of pre-service teachers during the tutoring/mentoring experience, including improvements in literacy knowledge, instructional skills, relationship building with families, students, and colleagues, understanding culturally responsive teaching, and moving beyond deficit views of students being tutored. The third area established long-term learning and growth of pre-service teachers after tutoring/mentoring experiences. Finally, the fourth area was mediating factors associated with pre-service teacher growth, such as building relationships, connecting academic content with tutoring experiences, and coaching pre-service teachers during the tutoring/mentoring experience. Of the studies reviewed, few looked at literacy work in digital spaces.

Allen and Swearingen (2002) studied how both pre-service and in-service teachers developed their understanding of literacy instruction in a university reading clinic for at-risk readers. The pre-service teachers worked in pairs to offer weekly instruction, with one pre-service teacher offering instruction while the other observed through a one-way mirror. The

findings and discussion did not address the partner-based structure of the experience for the pre-service teachers, either the rationale for or results from this set-up.

Practicum in Virtual Spaces

High-quality practicum experiences involve extensive time in field-based placements, with appropriate scaffolding provided by a more expert other. While traditional field-based placements involve physical presence in a classroom or other educational setting, some research examined elements of practicum completed in virtual spaces.

Hixon and So (2009) reviewed literature about virtual practicum experiences and named three categories of technology-enhanced field experiences. Type I field experiences occur in traditional, physical classrooms, with technology used for supervision, reflection, or communication. Type II field experiences involve remote observations of classroom teachers and/or students using videoconferencing or pre-recorded videos. Type III field experiences are fully virtual, using tools such as virtual reality and computer-enhanced simulations.

Billingsley and Scheuermann (2014) reviewed fourteen studies utilizing Hixon and So (2009)'s Type II and Type III technology-enhanced field experiences for pre-service teachers in special education programs. These studies used technology in four main ways: multimedia case studies; videoconference technology for remote supervision of pre-service teachers; audio-cued coaching for "bug-in-ear," real-time feedback; and virtual reality platforms allowing pre-service teachers to interact with avatar "students."

Several studies successfully leveraged technology (such as Skype) to facilitate scaffolding and mentoring through activities such as post-observation reflection and debriefing (i.e., Reese, 2017). However, the actual practicum experiences remained situated in local schools. Using the search terms "teacher preparation," "practicum," "field experience," and

"virtual," there were no articles using virtual tools, such as videoconferencing, for pre-service teachers to tutor students in real time as a form of clinical experience.

Methodology

This descriptive study used a mixed method design to investigate the research question: How does virtual tutoring impact both pre-service teachers and students served?

Context

Located in central Virginia, our institution is a public liberal arts university serving approximately 4,400 undergraduate and 300 graduate students. Focused on language and literacy development for students in grades three through six, the intermediate literacy course I teach is in our College of Education's five-year undergraduate pathway. Pre-service teachers complete 20 practicum hours in certain courses, including this course. Typically, we work with our Director of Clinical Experiences to arrange placements for students based on their schedule availability, course needs (i.e., a literacy- or math-focused setting), and previous practicum settings, to provide candidates with varied placements. In accordance with CDC guidelines and to reduce risk for our pre-service teachers, no in-person practicum experiences occurred during the summer of 2020. Instructors developed alternative practicum experiences to meet their instructional goals.

To offer a meaningful, field-based placement for my intermediate literacy course, I designed a model of virtual tutoring. I structured the experience to include ten hours of planning and ten hours of tutoring, which translated into two hours of planning and two hours of tutoring each week for the duration of our five-week semester, or 20 total hours. Pre-service teachers worked in dyad pairs to plan weekly tutoring sessions. Each week, I provided goals (see Table 1)

to align tutoring with topics discussed in class. I also provided resources for students to read and

asked them to work in dyads to plan to meet weekly instructional goals (see Figure 1).

Table 1

Weekly Instructional Goals for Virtual Tutoring

Suggested Pacing	Instructional Goal(s)	Practicum Portfolio Component Due
Week 1	• Getting to Know Each Other as Readers & Writers • Baseline Assessments of Reading & Writing	Practicum Contract Reflection #1
Week 2	• Reading: Comprehension Strategies & Assessment • Writing: Heart Map & Memoir Writing	E-Text Evaluation
Week 3	• Reading: Fluency Strategies & Assessment • Writing: Heart Map & Memoir Writing	Reflection #2
Week 4	• Reading: Vocabulary Strategies & Assessment • Writing: Free choice genre(s)	Literacy Workstation Evaluation
Week 5	• Reading: Wildcard Strategy (whatever you and the student choose!) • Writing: Free choice genre(s) • Closing	Reflection #3

Figure 1

Sample Weekly Resources to Support Virtual Tutoring

Students submitted weekly reflections following virtual tutoring, addressing questions like, "What did you learn about your student as a reader and a writer this week? What are their strengths and learning needs? How will this information impact your subsequent instructional choices?" I read each reflection and provided written feedback to students, with suggestions for subsequent tutoring sessions including instructional moves (such as fostering engagement or comprehension strategies), books or online resources to read together, or ways to support tutees' writing. I also met with some dyads on Zoom to talk through challenges and problem-solve together. In this way, I filled some of the roles a mentor teacher would in a traditional practicum setting.

Prior to starting the tutoring program, pre-service teacher dyads communicated with families to establish what dates, times, and platform would be best for virtual tutoring; I suggested Zoom or Google Meet, since both are accessible to attendees without requiring an account. Pre-service teachers submitted a practicum contract documenting the logistics of

planning and tutoring, as well as long-range planning for who was responsible for reading or writing instruction in each session.

Participants

In this study, I worked with two distinct groups of participants: pre-service teachers in my course, and literacy student tutees in grades three through six.

Pre-service teachers. I used convenience sampling (Patton, 2002) to recruit participants from pre-service teachers in my class. I invited students to participate in the research project via emails and announcements on our learning management system. A colleague collected consent forms and communicated with participants to protect their identities until the semester ended.

Of my 24 students, nine agreed to participate in the study. Six students returned the pre- and post-assessments, for a response rate of 67%. All participants identified as female; half had finished their sophomore year and half their junior year of college. Because of the sequencing of the class, this was not the students' first practicum experience: they had a minimum of two other 20-hour practicum experiences prior to enrolling in this course.

Literacy student tutees. I worked with the Resident Services Coordinator of a local housing project with an established relationship to our university to recruit students in grades three through six living in the community via convenience sampling (Patton, 2002). Another teacher in the school district who graduated from our literacy specialist program the previous year provided recommendations for students who would benefit from free literacy tutoring to fill remaining spots.

All twelve students who participated in virtual tutoring agreed to participate in the study and completed the survey, for a response rate of 100%. Twenty-five percent of participants

recently completed each of second, third, fourth, and fifth grades. Most participants identified as female (66.7%), with 33.3% identifying as male.

Data Collection and Analysis

I collected data from three surveys, all administered anonymously via Google Forms. Pre-service teachers completed two surveys, one as a pre-assessment and one as a post-assessment and created an identifier so I could pair their responses for analysis. Literacy student tutees completed a survey at the end of their experience. All surveys included both quantitative questions, asking participants to respond on a Likert scale between 1 (strongly disagree) and 5 (strongly agree), and open-ended qualitative questions.

I utilized descriptive statistics and *t*-tests for quantitative data collected, and thematic analysis using the constant comparative method (Strauss & Corbin, 1998) for qualitative, open-response data collected in the surveys. All analyses were completed using Excel.

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Findings

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Based on results from surveys, virtual tutoring impacted both pre-service teachers and literacy student tutees in different ways.

Pre-Service Teachers

On the survey, quantitative questions addressed three main areas. First, I established pre-service teachers' level of comfort working with intermediate (grades 3-6) students in literacy in one-on-one, small-group, and whole-group settings (survey questions 1-3), mirroring the realities of literacy instruction in an elementary classroom. Question 4 addressed the uniqueness of the virtual practicum experience. Questions 5 and 6 examined the pre-service teachers' level of comfort with elements related to planning, such as collaboration with peers and locating texts for

students to read. The results for each question are in Table 2. Statistically significant differences between the pre- and post-assessment occurred in Questions 1, 2, 3, and 6.

Table 2

Paired Samples t-Test Comparing Pre-Service Teacher Pre- and Post-Survey Results (n=6)

	Pre		Post				
Question	*M*	*SD*	*M*	*SD*	*t*	*Df*	*P*
Q1: I feel prepared to work with intermediate (grades 3-6) students in literacy in one-on-one settings.	2.67	1.47	4.5	0.3	-5.97	5	0.0019*
Q2: I feel prepared to work with intermediate (grades 3-6) students in literacy in small-group settings.	2.83	1.77	4.5	0.3	-5	5	0.0086*
Q3: I feel prepared to work with intermediate (grades 3-6) students in literacy in whole-group settings.	2	0.8	4	0	-5.478	5	0.00012**
Q4: I feel in-person literacy instruction is more effective than virtual instruction.	3.83	0.97	3.83	0.97	-0.349	5	0.52
Q5: Working with a partner/colleague to plan and implement literacy instruction is helpful.	3.83	0.97	4.5	0.3	-1.195	5	0.11
Q6: I feel comfortable locating texts for	2.83	0.97	4.17	0.57	-2.697	5	0.012*

intermediate (grades 3-6) students to read.		

The two areas without statistically significant differences—questions 4 and 5 on the survey—also had the highest pre-assessment means. Pre-service teachers' responses to question 4 increased slightly after completing the virtual practicum experience, meaning they did not lower their opinions of virtual teaching after trying it. As for question 5, pre-service teachers may already realize the power of collaborating with a partner or colleague to plan and implement literacy instruction.

In the post-assessment, I asked two additional questions to reflect on the impact of virtual tutoring on students' growth. Pre-service teachers agreed with the statement "I felt virtual tutoring had an impact on students' reading skills," (M = 3.71, SD =0.57), and agreed slightly more strongly with the statement, "I felt virtual tutoring had an impact on students' writing skills" (M = 4, SD = 0.67).

Open-ended questions. On the pre-assessment, pre-service teachers addressed potential benefits of and concerns about tutoring a child virtually. Commonly identified potential benefits included the personal, one-on-one nature of tutoring, and the ability for instruction to continue without location-based restraints. Other potential benefits included families being more involved, students and tutors getting to stay at home while continuing instruction, and needing fewer materials. One response indicated no potential benefits. The most common concerns about tutoring a child virtually included accessibility of materials, especially internet access; limited proximity to gauge a child's performance; the ease of re-teaching and explaining misconceptions; building and maintaining personal connections with tutees; and keeping tutees engaged.

On the post-assessment, pre-service teachers identified successes, challenges, and impacts of virtual tutoring on their future classroom teaching. Table 3 lists emergent themes ranked in order of popularity. These responses indicated that pre-service teachers felt successful developing students' literacy and digital literacy skills, personalizing instruction, and building relationships with students, while they faced challenges with engagement, writing instruction, communication, and internet connectivity.

Table 3

Pre-Service Teachers' Successes, Challenges, and Lasting Impact of Virtual Tutoring

Response Category	Emergent Theme	Example Student Responses
Successes	Literacy Skills	"My student learned several new vocabulary words. We saw an increase in reading level from the beginning to the end."
		"We had successes with writing; my student initially mentioned challenges with brainstorming, but the heart map activity helped her come up with new ideas for writing. My student enjoyed listening to part of an audiobook and reading an e-book. She made many inferences and improved her visualization, summarizing, and synthesizing skills over the course of the tutoring experience."
	Digital Literacy	"Graphic organizers became very useful when sharing the screen on Zoom."
		"My student loved the chat feature on Zoom and used it to pose questions he thought of during reading and for writing activities."
		"[We used] Google docs for writing sessions."
	Personalization	"The child liked to be creative with their writing instead of being told what genre they had to focus on."
		"I was able to figure out what my student's interests were and incorporated them in our reading and writing activities."

	Relationships	"I formed a great relationship with my student and already had a good relationship with my partner." "It was nice to have one-on-one time with the student that an in-class environment might not have offered."
	Literacy Identity	"They referred to themselves as a writer for the first time!"
	Enjoyment	"We had fun working during our tutoring experiences!"
Challenges	Engagement	"I found family interruptions and background noise to be a challenge keeping my student focused." "Student motivation in working at home [was lacking]." "[We had] challenges with attendance/tardiness."
	Writing Instruction	"[It was hard] not being able to see her writing because she didn't turn on her screen or utilize the chat option in Zoom, so she always read her writing aloud." "[It was hard] monitoring my tutee's writing assignments and having them show me things they wrote and drew in their journals."
	Communication	"Difficulties [arose] with gauging her interest in activities because she was reserved and hesitant to answer questions reflecting her perceptions of our lessons."
	Materials	"[We had] Internet issues."
Impact as a Future Teacher	Literacy Instruction	"I found resources I can use in my future class room, and it made working with students on reading and writing seem less scary." "My virtual tutoring experience solidified my readiness to become a teacher. I feel confident I'll be able to meet my students' learning needs in the future and find plenty of resources to support them."
	Online Learning & Resources	"It provided me with insight into navigating online learning as an instructor." "It taught me to have an abundance of interactive activities with short lectures."

		"It allowed me to realize that virtual tutoring is possible and students can still learn even if it's through a screen."
	Personalizing Instruction	"It made me feel more prepared for working with a student one-on-one."
	Adaptability/ Flexibility	"It taught me that as teachers we have to be able to adapt at any time to several different methods of teaching. We must do anything we can to continue instruction time even if there are bumps in the road or if we are uncomfortable with something new."

The pre-service teachers' anticipated benefits and challenges did align with actual successes and challenges, with a few exceptions. While pre-service teachers anticipated the benefit of one-on-one instruction, they did not anticipate specific literacy and digital literacy skills students would develop under their instruction, nor did they anticipate the power of relationships formed with both tutees and dyad partners. Interestingly, building relationships was initially mentioned as an anticipated concern instead of an anticipated benefit. Anticipated concerns and actual challenges strongly aligned, including student engagement and the lack of proximity in assessing students' work, especially for writing instruction. Pre-service teachers stated they learned important lessons for their future teaching, including strategies for literacy instruction as well as online learning; ways to personalize instruction to meet individual students' needs; and the importance of flexibility.

Literacy Student Tutees

On the survey for literacy student tutees, quantitative questions compared perceptions from the previous school year and virtual tutoring in two main areas: students' learning of reading and writing skills (survey questions 1-2), and students' excitement about reading and writing (survey questions 3-4). Table 4 summarizes the results.

Table 4

Paired Samples t-Test Comparing Tutees' School and Virtual Tutoring Experiences (n=12)

	School		Virtual Tutoring				
Question	*M*	*SD*	*M*	*SD*	*t*	*Df*	*P*
Q1: I learned a lot about reading.	3.75	0.75	4.33	0.61	-2.24	11	0.046*
Q2: I learned a lot about writing.	3.92	0.63	4.42	0.45	-1.73	11	0.11
Q3: I felt excited about reading.	3.42	2.81	4.08	1.72	-1.38	11	0.19
Q4: I felt excited about writing.	4.08	1.36	4.17	1.06	-0.22	11	0.83

Note. *Indicates significance at *p<0.05*.

While tutees' responses were only statistically significant in Question 1, all of their averages were higher for virtual tutoring as compared to their experiences during the previous school year.

Open-ended responses. In addition to the quantitative questions, literacy student tutees were asked two open-ended, qualitative questions about their favorite and least favorite aspects of virtual tutoring. Reading was most often listed as a favorite aspect, aligning with the statistically significant results for Question 1. The next most popular response was liking their tutors: they liked talking to their tutors, and their tutors made learning fun. Other responses about favorite aspects included writing and being able to complete the tutoring experience from home. For the least favorite aspects of virtual tutoring, the most common response related to time. Some tutees said it was too long; others said it was too short. Other least favorite aspects of virtual tutoring involved activities like taking notes, coloring, reading online, and writing.

Discussion

Even though this virtual tutoring model involved only one-on-one instruction, the pre-service teachers noted statistically significant improvement in their levels of preparation to teach one-on-one, in small groups, and especially in whole-group settings. This finding aligned with Sailors et al. (2004), who found all eight high-quality literacy programs analyzed included opportunities for one-on-one literacy tutoring, among other placement contexts (small group, whole group, and individual).

Furthermore, pre-service teachers' open-ended survey responses aligned with the findings of Nelson, Papola-Ellis, and Giatsou (2019), who noted participants developed deep literacy content knowledge, instructional differentiation skills, responsive teaching skills, and increased confidence as future literacy teachers. The survey results indicated that this virtual tutoring experience impacted future teaching through raising awareness of literacy instruction, online learning and resources, ways to personalize instruction, and the importance of adaptability and flexibility.

Relationship building was another finding supported in the literature. Tutees commented on enjoying reading instruction their tutors offered and personal relationships with their tutors. Hoffman et al. (2019) also found pre-service teachers grew in building relationships. Allen and Swearingen (2002) paired pre-service teachers together to offer individual tutoring sessions, though they did not explicitly investigate the nature of collegial relationships of dyads. While survey results did not indicate a statistically significant difference in pre-service teachers' perception of working with a partner to plan and implement instruction, the pre-survey data revealed they agreed with this idea ($M = 3.83$, $SD = 0.97$), and agreed even more strongly in the post-survey ($M = 4.5$, $SD = 0.3$).

Timely feedback or coaching on field-based performance is a key component of high-impact clinical experience (AACTE, 2018; ILA & NCTE, 2017, Risko & Reid, 2019; Sailors et al., 2004). In lieu of a mentor teacher, I served as the "knowledgeable other" (Sailors et al., 2004, p. 348) coaching pre-service teachers by reading and commenting on weekly plans for instruction and reflections after tutoring. While no pre-service teachers directly commented on the nature of coaching I provided, the literature confirms this element should remain part of any virtual practicum experience.

Finally, defining the nature of a virtual practicum remained elusive. Hixon and So (2009)'s Type I, Type II, and Type III field experiences did not completely align with the present model. While the field experience was fully virtual, it also did not rely upon tools such as virtual reality and computer-enhanced simulations; rather, technology facilitated real-time interactions between pre-service teachers and literacy student tutees.

Implications

While we long to return to the "normal" we knew before COVID-19, the reality is clear: pre-service teacher preparation programs will continue to face the challenge of providing meaningful field-based practicum experiences while working around limited access to in-person placements. A dyad-based virtual tutoring experience offers one potential work-around for teacher preparation programs to consider.

Based on existing literature, elements of this model appearing critical to its success included:

1. Pairing pre-service teachers in dyads to design and implement instruction;
2. Building partnerships with local schools and community agencies to identify students who would benefit from individualized tutoring;

3. Ensuring access to technology for both pre-service teachers and literacy student tutees (i.e., computers, tablets, and/or phones with internet connectivity);

4. Providing coaching and feedback from a skilled educator, either a mentor teacher or a university supervisor or instructor, on both planning and implementing instruction; and

5. Maintaining open communication with families about expectations and ways to support their child's participation in tutoring (i.e., scheduling, best platform for tutoring, and finding a productive space to work).

Limitations

Naturally, the small sample size and exploratory nature of this research design means results cannot be generalized. In addition, this study occurred during a condensed five-week summer semester. The context of the pandemic could be another limitation, as participants were facing additional stressors that may have impacted the results.

Further Research

Further research could investigate the impacts of dyad-based virtual tutoring in other content areas, like math. In addition, this model's viability with different age groups should be examined. Primary students (grades K-2) face distinct challenges as they acquire basic digital literacy skills some intermediate students (grades 3-6) already have exposure to, if not mastery of. Furthermore, this model could be extended to serve students not only in one-on-one settings, but also in small-group settings. Examining the impact of this model both during a pandemic and beyond would be a potential research area. Because virtual tutoring requires more responsibilities of the course instructor than a traditional classroom-based practicum experience, future research should consider the implications of virtual literacy instruction on the instructor. Looking at the types of support the instructor provides in this tutoring model could also yield enlightening data.

Conclusion

Preparing future teachers requires an intentional balance of learning pedagogical and content-area skills and applying them in authentic, field-based contexts, and preparation of future teachers continues even during a pandemic. Amidst barriers to placing pre-service teachers in the field, whether due to COVID-19 or even a lack of transportation, virtual practicum experiences offer a novel possibility, transcending barriers and providing future teachers opportunities to practice meeting the needs of students, even beyond the walls of a classroom.

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