EDUCATIONAL
RENAISSANCE

Case Story

Supporting Teacher Candidates During COVID-19: Lessons Learned

Charlene Atkins, PhD. University of Central Missouri

   email: catkins@ucmo.edu

Angela Danley, EdD. University of Central Missouri

   email: danley@ucmo.edu

Abstract

This article provides the personal account of two professors who reflect on the challenges of teacher education preparation due to COVID-19. They discuss the swift transition from face to face instruction to virtual learning and teaching including inequities faculty and teacher candidates faced during remote learning, obstacles surrounding state requirements for practicums and certification along with the social emotional impact. Suggestions for moving forward, based on the lessons learned, include additional supports for teacher candidates. As this was a new experience faced by teacher education programs in the United States, relevant literature is limited.

When the 2020 spring semester started in January, instructors at the University of Central Missouri were prepared to continue delivering instruction in a face to face setting. Additionally, the supervised clinical practicum for elementary and early childhood education majors had been coordinated and confirmed with eight school districts. Teacher candidates (TCs) were entering their final semester of undergraduate coursework, including embedded clinical practicums, in preparation of the subsequent fall student teaching assignment. Face to face interactions are extremely valuable when preparing TCs for the student teaching experience. This in-person contact allows course instructors and practicum supervisors opportunities to support student growth while providing TCs opportunities to build the knowledge and confidence necessary for success in the student teaching placement to follow (Collopy & Arnold, 2009). Each TC, at this

institution, was scheduled to complete two, seven to eight-week, clinical practicum experiences in a k-12 school building. TCs were prepared to work with pre-determined cooperating teachers in early childhood and elementary classrooms two full days each week. The practicum allows the TCs to build relationships with in-service teachers and elementary students while gaining a strong understanding of the school community's culture by working side by side with two cooperating teachers. One of these two practicum placements later becomes the student teaching placement for the following semester. The clinical practicum is a critical component of the educator preparation program because it allows TCs the opportunity to apply what they have learned in their undergraduate courses to the elementary and early childhood classrooms (Symons et al., 2020). By mid-March, approximately eight weeks into the semester, the TCs at this Missouri university were

already in a comfortable routine, completing thirteen credit hours of face to face undergraduate coursework while working side by side with their cooperating teacher in the first 8- week placement. TCs were actively engaged with university instructors completing assignments in Communication Arts Integration, Curriculum Design and Assessment in Mathematics, Curriculum and Assessment, and Classroom Management courses. During the first 8-week placement, TCs developed and implemented required lessons receiving feedback from both their cooperating teacher and university instructor. The TCs had the opportunity to conduct a Number Talk and implement a Launch, Explore, Summarize lesson for their Curriculum Design and Assessment in Mathematics course along with a vocabulary mini lesson and comprehension lesson for Communication Arts Integration. TCs were eager to begin their second placement after spring break and understood the expectations for completing a writing lesson to analyze authentic student work in Communication Arts Integration, a science or social studies lesson in Curriculum and Assessment, and additional mathematics lessons for Curriculum Design and Assessment in Mathematics. TCs also understood the rigor and relevance surrounding each of these field embedded assignments. All of this came to a halt in mid-March 2020 as they entered their spring break week.

On March 16, 2020, TCs received notification that clinical practicums were being canceled for the remainder of the spring semester. Partner school districts were also notified of this, while they too were facing cancelations due to the circumstances the nation was experiencing with COVID-19. Considering the health of our students, instructors, classroom students, and field experience supervisors, senior university administrators made the decision to end all field experiences, regardless of whether our partner districts returned to face-to-face classrooms. TCs were also notified that their undergraduate education classes would all be delivered completely online for the remainder of the

semester. University instructors were provided one week following spring break to transition to a virtual teaching and learning format. Instructors and TCs had access to Blackboard, a learning management system, and access to Zoom, a virtual meeting host, to make the transition easier despite other challenges.

In the weeks that followed, the authors took advantage of opportunities to reflect on the online delivery of instruction, challenges that instructors and TCs faced while attempting to replicate the practicum experience, and the need to collaborate with other instructors to provide meaningful experiences preparing TCs for virtual teaching and learning in the future. This time also brought to light the need for additional resources for TCs along with training in culturally responsive teaching and trauma informed care.

Context of the Challenges Due to COVID-19

Across the nation, teacher education programs were faced with challenges similar to the challenges school districts faced with transitioning to a virtual learning environment. Transitioning a traditionally face to face class to an online platform, in a very short time frame, created a state of distress for both TCs and instructors. Anxiety was heightened due to the unknown of what the remainder of the semester would look like before heading into student teaching in fall 2020. This was supported by the thoughts of Delamarter and Ewart (2020), "For many of our candidates, the normal fears and anxieties that surround student teaching have been magnified to the point of that even our most promising student teachers feel overwhelmed and panicked" (p.1).

Just as Delmarter and Ewart (2020) pointed out in their article, instructors of teacher education programs were faced with how to address the TCs' fears and anxieties in a way that would still afford opportunities to facilitate their growth. Students expressed anxieties over completion of their education program, meeting state required observation hours, their personal health, struggles with online learning and successful course

completion, and staying connected with instructors and peers. Becoming a teacher requires being flexible and responding to unfamiliar situations, such as the above mentioned anxieties. Though being faced with these situations can help facilitate personal and pedagogical growth (Christie et al., 2015; Fulford, 2016), the challenges educators faced due to COVID-19 also lead to panic, exhaustion, and virtual conferencing fatigue (Skylar, 2020). The nation's teachers scrambled to manage new challenges when rushed to provide virtual learning (Gewartz, 2020).

Challenges Faced During the Early Stages of the Pandemic

In this article, two professors of education at the University of Central Missouri provide an overview on the impact of COVID-19 which includes discussion of the obstacles related to moving to virtual learning and replacing the valuable clinical practicum. Challenges focused on modifications made for field embedded lessons, inequity issues faced by faculty and TCs, state requirements for education preparation, and the social emotional impacts of unexpectedly moving to distance education formats. Additionally, the authors provide suggestions for moving forward during the pandemic or in the event of any emergency which results in virtual learning and teaching.

Modifications to Field Embedded Lessons

The authors were charged with not only adapting face to face cooperative learning structures to online delivery, but with designing activities to replicate the experiential learning that takes place in the elementary and early childhood classroom during the clinical practicum. Both authors share examples of adjustments made to course curriculum and implementation strategies along with their personal challenges. The authors also share observations of student morale as a result of the quick transition to virtual learning, in the following paragraphs.

In the Curriculum Design and Assessment in Mathematics course, students were initially

required to develop and teach a three-phase mathematics lesson. This expectation was designed to provide students the opportunity to not only develop a high-quality lesson involving a launch, exploration and summary, but also to experience teaching this lesson to elementary students. Teaching the lesson would allow the TCs to practice and strengthen their instructional skills while providing an opportunity for the cooperating teacher to observe and provide feedback. TCs would also have been able to analyze the student work collected to practice their assessment skills. In place of this practicum expectation, TCs were asked to watch a quality classroom teacher implement a mathematics lesson via video and to complete an observation, including an analysis and reflection, of this lesson. Though the TCs were still able to think critically about the lesson design and implementation, they were not able to experience first-hand the interaction with elementary and early childhood students nor were they able to assess student work from this particular task or receive feedback from, their cooperating teachers, on instructional strategies employed.

For the Communication Arts Integration course, TCs were to develop a writing lesson to teach in their second placement. TCs would then take the writing samples collected and analyze the class set of writing. TCs were to also develop a rubric, create instructional strategies and activities on moving the students forward with their writing. This project provides the TCs the opportunity to analyze data and make informed instructional decisions. Due to the cancellation of the practicum experience, an alternative assignment connected to the original writing lesson was given. TCs were given a selection of first grade samples to analyze on either narrative, informational, or opinion writing. The TCs were asked to develop a rubric to score the samples and make informed instructional decisions based on the results. This alternative assignment provided the TCs the opportunity to experience the work they would have done in the classroom, but they were not afforded the opportunity to learn from the

implementation phase and observation feedback.

The authors found it challenging to develop alternative lessons, tasks and assignments given the short time frame of moving to virtual instruction. This required the authors to create new scoring rubrics, seek appropriate videos and writing samples, modify the course schedule including due dates of assignments, plan and schedule virtual class meetings, and develop online instructional materials. These challenges have served as unique learning experiences for both students and instructors. Even though the authors were able to develop appropriate and successful alternative assignments, the challenge of providing field experiences remains a concern. Students' anxieties appeared to lessen as more virtual class meetings occurred. Even though practicum requirements had been waived, students did express disappointment surrounding the lack of in-person field experience with elementary and early childhood students and mentor teachers. Additionally, students shared that they missed being able to interact with instructors and peers in-person.

Inequities in TCs Experience with Virtual Learning

Prior to the transition to distance learning, TCs were in a routine to attend face to face classes one day a week from 8:00 a.m. to 2:30 p.m. and were placed in the elementary and early childhood classrooms completing their clinical practicum two full days a week. While TCs were in the elementary and early childhood classrooms, they worked side-by-side with a mentoring teacher. This provided opportunities for co-teaching and implementing course required lessons while receiving immediate feedback from both the mentoring teacher and the university supervisor. This also provided university supervisors first-hand experience of TCs dispositions. As public school districts began to close, across the state of Missouri, TCs were informed teaching and learning would take place virtually for the remainder of the spring semester. Some university instructors held synchronous online courses while others offered asynchronous formats. In place of weekly face to

face course meetings for both Communication Arts Integration and Curriculum Design and Assessment in Mathematics, students began attending weekly synchronous virtual class meetings. All TCs had the means to access the learning management system, Blackboard. However, TCs had limited exposure to best practices in educational technology built-in to their program of study. Students previously completed a one-credit hour technology course, which focused on tools and resources but did not include other valuable elements of distance education. This course allowed students many opportunities to learn about and practice using educational applications with a focus on integrating technology in a face to face course. A one-credit hour course does not allow time devoted to additional areas of importance such as etiquette and equity, course development, and online organization.

Out of concern for student access, the university provided hot spots and devices, such as laptops and iPads, for students who did not have adequate equipment available. However, several students were unable to attend virtual course meetings as a result of limited access to high-speed internet. TCs were also accustomed to weekly face to face interactions with peers and instructors. These interactions were an integral part of learning opportunities. When moved to virtual learning, there was little time to prepare faculty or students on how to maintain those established relationships. Some faculty had prior experience in delivering instruction online and hosting virtual conferences, while others lacked the level of experience and confidence of their colleagues. There were some faculty who previously completed the university's mandatory training for delivering online instruction, yet others had not yet had the opportunity to do so. Faculty who participated in the Quality Matters (QM) training and/or the Association of College and University Educators (ACUE) training volunteered to be a point of contact for colleagues who requested assistance with delivery of instruction and troubleshooting (2020). QM, a non-profit quality assurance organization, instills a culture focused

on effective delivery of instruction (Association of College and University Educators, 2020). ACUE focuses on effective teaching practices centered on building a community of learners to ensure each student receives a meaningful educational experience. According to Heitner and Jennings (2016), "a lack of understanding about culturally responsive issues and practices to meet the needs and expectations of online learners can lead to miscommunication, mistrust, poor guidance, frustration, attrition, and delayed program completion" (p. 2). Inequities in online instruction occur when only a few faculty are trained and when students are not exposed to what it means to be in a distance education setting. Inadequate accessibility to necessary tools and equipment along with limited training creates barriers for both students and faculty.

Practicum Experiences and State Certification Requirements

Requirements of the state department of education are critical components of teacher preparation programs, to ensure each TC obtains certification after successful completion of student teaching and required state-level assessments. In the state of Missouri, mid-level TCs are expected to have a minimum of 45 clock hours of practicum experience (Missouri Department of Elementary and Secondary Education, 2014). Additionally, the Missouri Department of Elementary and Secondary Education (2020) requires successful completion of the Missouri Content Assessment (MOCA). TCs must score a 220 on the 100 - 300 scale as well as score 42 points on the Missouri Educator Evaluation System (MEES).

 On April 7, 2020, the Missouri state governor responded to the challenges universities were facing regarding practicum experiences and TC certification. The governor issued a waiver on practicum experiences, student teaching, and qualifying scores for the state and educator evaluation system. This eliminated some students' level of apprehension for the 2020 spring semester, but still left concern for the fall 2020 semester.

Social Emotional Impact

While students and instructors struggled to overcome the challenges surrounding field embedded lessons, inequity issues, and state certification requirements, it became clear that some students and instructors were also struggling with the social and emotional impact of business closures and social distancing guidelines. Though many of our students and instructors regularly participated in social media activities prior to the pandemic, many more became frequent users of platforms such as Facebook, Instagram, and Twitter during the period of isolation. To combat the symptoms of depression and inspire good mental health and mindful practices, faculty at this university came together to develop engaging and motivating activities for students and instructors. For example, many instructors created short video clips, shared via social media, to send positive messages for all education majors reminding them that we were all in this situation together and recommending students take advantage of the unexpected opportunity to get outdoors, practice self-care, start a new hobby, and increase communications with instructors, classmates, friends and family. One of the authors has shared her personal video for TCs and faculty, which can be accessed via YouTube. TCs were encouraged to build team videos and challenge students of other programs to do the same. Mindful messages from the trauma informed care team were sent daily to encourage positive thinking and promote active communication. Instructors reached out to their students more frequently and at new levels to promote student engagement with classmates and teachers. One example of a mindful message shared with students and faculty was the suggestion of keeping a weekly gratitude journal. Students and faculty received the following mindful message: At the end of each day this week, write down a few things that you appreciate. This could be actual things, like your favorite sneakers. Or it could be something that happened, or a place where you felt comfortable, or someone who was nice to you. Students responded with

positive comments stating that they enjoyed the mindful messages so these continued into the 2020 summer and fall semesters.

Summary of the Challenges

Initially, students and faculty were faced with multiple unexpected challenges and obstacles including removal from clinical practicums, alterations to field embedded lessons, inequity issues, uncertain impacts on state requirements for certification, and the emotional waves of these challenges along with the additional anxiety created by social distancing practices. Eventually, the challenges mentioned above and identified obstacles became problem-solving opportunities and learning experiences. Faculty learned new instructional strategies for virtual teaching while students developed online learning skills. TCs developed a deeper understanding for trials classroom teachers might face and the need to be flexible and remain positive even in extremely difficult situations. Instructors also identified areas of strengths and weaknesses in the current educator preparation program. The value of educational technology and distance education platforms came to light for many who thought they would never encounter such a situation. The importance of quality communication, collaboration and cooperation at all levels was amplified during this unprecedented time.

Moving Forward

Reflecting on this sudden shift in education allowed instructors an opportunity to identify areas of strengths and weaknesses in the current educator preparation program. Specifically, areas that need to be improved in order to better prepare TCs for a smooth transition to virtual teaching and learning in the event this type of situation should reoccur. Areas to focus on include best practices in virtual learning and teaching, resources for TCs to use in their own learning and future teaching, substitutions for practicum experiences, culturally responsive teaching in a virtual learning format, and trauma informed care. Focusing on these areas will ensure a successful

experience for TCs in the distance education environment. The authors elaborate on these specific areas in the following sections.

Virtual Learning and Teaching Module

One area immediately identified was the lack of distance education preparation for virtual teaching and learning environments. This gap in student knowledge and skills will be addressed by the development and implementation of a principles of virtual teaching and learning module. This module was created by a task force composed of university professors of educational technology and instructors of elementary education courses. Content of this learning module includes topics related to ethics, etiquette, and equity, along with curriculum design and implementation, assessment strategies, communication, organization and time management, and tips for learning as an online student. Module lessons include short videos, informational text, web-links, and self-assessments. The module will be available to TCs as a Blackboard Community so that TCs will be able to complete the module at their own pace. Once students have successfully completed each section of this module, they will earn a completion badge. Once all badges are earned, students will receive an e-certificate. This certificate will be included as an additional requirement to be met before approval to student teach is granted. This learning module will be beneficial for TCs delivering online instruction to K-12 students during practicums and student teaching experiences. It will also serve to prepare TCs as online students of distance education, should they return to an online classroom in the future.

 This module also serves as a stepping stone for the later development of a full course on distance education. Due to the short time between the end of the spring semester and the beginning of the fall semester, along with the current uncertainty of what the fall semester may bring, a module was preferred to a full course creation at this time. A full course creation must be vetted through the university curriculum process which can take up to one year, however a learning module can begin to

bridge the gaps while a full course is in the development phase.

Resources for Teacher Candidates

When TCs transitioned to online learning, the need for equipment and resources increased. Providing a variety of resources such as technology tools and recommendations for teaching online became imperative. In preparation of this or any similar situation happening again, a resource document for technology support was developed for TCs with information on how to obtain a laptop and hotspot. As some TCs will be returning to in-person practicums, the College of Education will be providing additional equipment, such as iPads, Swivls, and headsets, for TCs who will need to live stream their lessons or record lessons for their university supervisors to evaluate. This informational document will be sent to the TCs in a timely and efficient manner to make the transition to virtual learning as smooth as possible. Information regarding the availability of equipment will also be shared with student teachers and their university supervisors during virtual team meetings.   Additionally, as a future teacher, TCs will need simple and clear access to information on the state's certification and assessment requirements. TCs will need to have a clear understanding of changes in state exam policies and of any waivers put in place.

Substitutions for Practicum Experience

Practicum experiences are a vital part of the teacher education preparation program. When K-12 schools were canceled across the region, cooperating teachers were unprepared to best serve TCs in their practicum experience. It is imperative for instructors at all levels to collaborate and communicate regarding resources available, such as model teaching videos for TCs to continue to reflect on teaching practices. Additionally, collaborating with district administrators on virtual observation opportunities is also needed to ensure proper protocol is put into place to allow this type of online field experience. In a study conducted by

Karchmer-Klein (2007), results indicated the virtual practicum experience created opportunities to focus on the instructional issues. However, Karchmer-Klein stated that the virtual practicum experience does not replace time in the classroom, but does compliment a traditional teacher education program. When considering virtual practicum experiences in the future, the following questions Karchmer-Klein (2007) addressed in her study can be used:

> How does a virtual practicum create opportunities to learn ways to manage technology integration in the classroom? How does a virtual practicum create opportunities to learn ways to integrate technology into literacy instruction? How does a shared practicum experience allow preservice teachers to engage in class discussions and problem-solve issues confronted in their host classrooms? (p. 122)

Having an alternative plan for practicum experiences means planning ahead and working with school partnerships which will ensure a successful experience for all involved. Additionally, it will be imperative to work with the state education department on any changes made to teacher certification requirements.

Culturally Responsive Teaching in a Virtual Learning Format

Due to the unique characteristics each student and instructor brings to the course, a virtual classroom can present challenges that can impact the efficacy of teaching and student learning (Heitner & Jennings, 2016). The need to provide faculty professional development on culturally responsive teaching practices is necessary to make the online experience successful for all participants. Providing faculty professional development on the importance of maintaining learning partnerships is imperative so students feel valued. Mahmood (2020) stated, "Building trusting learning relationships is a cornerstone of culturally responsive instruction" (para 7).

Hammond (2015) suggests making lessons which

involve social interaction and utilizing gamified opportunities supports communal learning. Heitner and Jennings (2016) affirmed, "Faculty who teach online who understand and value culturally responsive pedagogy and have the knowledge and skills to implement best practices in meeting the needs of diverse learners will enhance both teaching and learning" (p. 68). Providing faculty the opportunity to engage in critical conversations centered around culturally responsive teaching would allow for an online learning experience supportive of all students. This particular area of challenge opens the door for additional action research.

Trauma Informed Care

It is necessary for trauma informed care resources to be in place whether or not classes meet in-person or virtually. Pandemics, like COVID-19, can trigger post traumatic events or anxiety. Processing prolonged stress and trauma can be physically and emotionally demanding (Brewin, 2003). Having a trauma informed care team at the university level who have received training in trauma and stress would be a valuable resource for faculty and students. Faculty need to be supported and have a strong understanding of the behaviors that may be associated with trauma as outlined by Hoch et al. (2015), which include the following:

- Difficulty focusing, attending, retaining, and recalling;
- Tendency to miss a lot of classes;
- Challenges with emotional regulation;
- Fear of taking risks;
- Anxiety about deadlines, exams, group work, or public speaking ;
- Anger, helplessness, or dissociation when stressed ;
- Withdrawal and isolation;
- Involvement in unhealthy relationships.

Davidson (n.d) stated, "Colleges are systems, and creating a trauma-informed climate requires the entire campus community...to deepen its shared understanding of trauma's impacts on learning

and agree to a campus wide approach" (p. 14). Davidson also affirmed that all members of the campus community need to collaborate and share responsibility in the academic, physical, emotional, and social well-being of each student. Additionally, adopting strategies on how to promote mindfulness is also imperative for faculty to engage students when providing instruction. Participating in trauma informed care and mindfulness training is crucial for faculty well-being and to supporting each student across the campus. Providing this type of resource and support will also help prepare TCs to be trauma informed as a future classroom teacher.

Next Steps

The authors' personal accounts have inspired the opportunity to engage in research centered around the impact of COVID-19 on teacher education. Creating a survey for teacher candidates to complete on virtual learning is worth considering. Engaging TCs in a focus group to gather their perceptions on their preparedness to student teach would also provide the teacher education program areas to improve in the event if another pandemic occurs. Additionally, a survey given to faculty in teacher education programs on resources for virtual learning and teaching would also be of value in order to create a strong and meaningful teacher education program that can be moved to online in the event we are unable to continue face to face teaching and learning environments.

Conclusion

At the beginning of 2020, public schools and universities were in session and teacher education programs were providing practicum experiences to prepare TCs for the classroom. This came to a halt in March 2020 as the spread of COVID-19 entered our state's institutions of education. Universities and k-12 schools were forced to eliminate face to face contact, leaving teacher education programs to rethink how field experiences could continue and what substitutions might support TCs during the transition. Reflecting on current practices and

planning ahead in the event TCs are placed in virtual learning and teaching experiences will ensure TCs are given the instruction and support needed to be successful teachers in the future. Lambert (2020) stated, "Extensive student teaching is required to earn most teaching credentials, and it is generally regarded as an essential part of a teacher's training before getting his or her own classroom" (para 4). However, when faced with a pandemic, this created a dilemma because the opportunities are limited. This has required a shift in thinking because teacher education programs needed to adapt the curriculum to a virtual format while engaging TCs in conversations on how to problem solve during a pandemic or crisis. Revising the teacher education programs and collaborating with the state department of education has been critical moving forward.

For fall 2020, sophomore and junior level teacher candidates will complete required practicum and observational hours through asynchronous online video evaluations. Senior level teacher candidates will complete their practicum and student teaching experience following their placement districts' protocol, whether it be online, face-to-face or hybrid instruction. The pandemic continues to present challenges and obstacles for everyone involved. This situation has forced educator preparation programs to invest in virtual learning professional development opportunities and revise the education program by preparing teacher candidates to offer their future students a quality education regardless of the instructional delivery format.

References

Association of College and University Educators (2020). *Changing lives.* https://acue.org/about/faculty

Brewin, C. R. (2003). *Posttraumatic stress disorder: Malady or myth?* Yale University Press.

Christie, M., Carey, M., Robertson, A., & Grainger, P. (2015). Putting transformative learning theory into practice. *Australian Journal of Adult Learning, 55*(1), 9–30.

Collopy, R., & Arnold, J. (2009). To blend or not to blend: Online-only and blended learning environments. *Issues in Teacher Education.* https://ecommons.udayton.edu/cgi/viewcontent.cgi?article=1014&context=edt_fac_pub

Davidson (n.d). Trauma informed practices for secondary education: A guide. *Education Northwest.* https://educationnorthwest.org

Delamarter, J. & Ewart, M. (2020). Responding to student teachers' fears: How we're adjusting during the COVID-19 shutdowns. Northwest *Journal of Teacher Education,15*(1), 1-10. https://doi.org/10.15760/nwjte.2020.15.1.3

Fulford, A. (2016). Education: Expectation and the unexpected. *Studies in Philosophy and Education, 35*(4), 415–425.

Gewartz, C. (2020). Exhausted and grieving: Teaching during the coronavirus crisis. *Education Week, 39*(30), 1-10.

Hammond, Z. (2015). *Culturally responsive teaching and the brain: Promoting Authentic Engagement and Rigor Among Culturally And Linguistically Diverse Students.* Corwin: A Sage Company.

Heitner, K. L. & Jennings, M. (2016). Culturally responsive teaching knowledge and Practices of online faculty. *Online Learning, 20*(4), 54-78.

Hoch, A., Stewart, D., Webb, K., & Wyandt-Hiebert, M. A. (2015, May). T*rauma-informed care on a college campus.* Presentation at the annual meeting of the American College Health Association, Orlando, FL.

Karchmer-Klein, R. (2007). Reexamining the practicum placement: How to leverage technology to prepare preservice teachers for the demands of the 21st century. J*ournal of Computing in Teacher Education, 23*(4), 120-129.

Lambert, D. (2020, April 17). *Unable to complete student teaching requirements, prospective teachers may soon get reprieve.* EdSource. https://edsource.org/2020/unable-to-complete-student-teaching-prospective-teachers-may-get-reprieve/629318

Mahmood, R. (2020). *Online teaching can be culturally responsive.* Teaching Tolerance. https://www.tolerance.org/magazine/online-teaching-can-be-culturally-responsive

Missouri Department of Elementary Education and Secondary Education (2020). *Coronavirus (COVID-19) information.* https://dese.mo.gov/communications/coronavirus-covid-19-information

Missouri Department of Elementary and Secondary Education (2014). https://dese.mo.gov/sites/default/files/Initial-Field-Clinical-Experiences.pdf

Quality Matters (2020). Retrieved from https://www.qualitymatters.org/

Skylar, J. (2020, April 24) Zoom fatigue is taxing the brain: Here's why that happens. *National Geographic.* https://www.nationalgeographic.com

Symons, C., Anderson, B., & Ward, A. (2020). *Teacher candidate's perspectives on the value of a site-based methods course.* The Teacher Educator. https://doi.org/10.1080/08878730.2020.1787569