A Dual Placement Approach to Online Student Teaching

Kevin J. Graziano
Nevada State College

Lori Feher
Nevada State College

Abstract

Many school districts across the United States now offer online K-12 education, and the proportion of all students in higher education taking at least one online course is at an all-time high of 32% (Allen & Seaman, 2013). With the evolution of online teaching and learning, teacher preparation programs must establish and offer online student teaching placements. The purpose of this case study was to investigate the experiences of seven secondary preservice teachers who completed student teaching in dual settings, online and on campus. Student teachers valued not having to write the curriculum for online classes, stated that classroom disturbances were limited online, identified valuable online tools and resources to differentiate their lessons, and reported high parental involvement with online classes. Student teachers, however, struggled to motivate their online students and manage their time efficiently. Recommendations on how to get started and improve online student teaching are provided.

Student teaching, for many colleges and universities, is the culminating field experience for education majors seeking to become teachers. Though the required hours to complete student teaching varies from institution to institution, new teachers consistently characterize student teaching as "the most valuable aspect of the education program" (Levine, 2006, p. 39).

Student teaching provides prospective teachers with the opportunity to test theories, knowledge, pedagogy, best practices, and classroom management techniques learned in undergraduate and graduate teacher preparation programs. A report by the National Council on Teacher Quality noted that a strong student teaching experience has the power to dramatically improve the vision of teaching excellence (Greenberg, Pomerance, & Walsh, 2011). Excellent mentor teachers can transmit effective instructional techniques and important teaching lessons.

All around, new technologies are changing the way the world functions. Individuals rely on technology to communicate, entertain, work, compose, create, and learn. Smart phones enable access to the Internet from any location. Information is literally at the fingertips of technology users.

The world of education is evolving as well, and school districts are increasingly incorporating technology into the classroom. Tablets and iPads, whiteboards, digital responders and recorders, e-books, and countless numbers of websites are being used in classrooms at every grade level. In order for teachers to keep up with modern technology and be highly skilled educators, they must not only know their content and pedagogy, but also be trained to teach effectively with technology. Teacher education should focus on how technology can become part of the teaching process, as teachers need to be able to use technology not only as a resource but also as a teaching tool (Feher & Graziano, 2016).

The purpose of this descriptive case study was to investigate the experiences of seven secondary preservice teachers from an undergraduate public college in the southwest who completed online student teaching, both online and on campus. The research question that guided this study was as follows: What are the experiences of preservice teachers who completed student teaching in dual settings, online and on campus?

Literature Review

As the digital revolution progresses, fully online programs, as well as individual online courses, are offered within a brick and mortar K-12 school setting. All 50 states, including Washington, D.C., now offer some virtual experience in K-12 education (Watson, Murin, Vashaw, Gemin, & Rapp, 2011). This influx of virtual experiences is occurring for social, economic, and political reasons, including the ability to offer courses at a lower cost, offer quality courses beyond limited geographical areas, and individualize content to meet student needs (Archambault, 2011).

Some states, such as Michigan, Alabama, New Mexico, and Idaho, have passed legislative measures requiring K-12 students to complete at least one online learning experience by the time they graduate high school. Florida has mandated that all school districts provide online learning opportunities to all K-12 students. Idaho has adopted online teaching standards and is also the second state after Georgia to establish a state-level online teaching endorsement (Kennedy & Archambault, 2012a).

According to *Keeping Pace with K-12 Digital Learning* (Evergreen Education Group, 2015), the five largest state virtual schools in the U.S., based on semester course enrollments in 2014-2015, are in the Southeast. They include Florida (394,712), North Carolina (111,634), Georgia (52,290), Alabama (41,578), and South Carolina (40,363). In school year 2014-15, state virtual schools served over 460,000 students, who took more than 815,000 supplemental online courses in 24 states.

Public school students in grades 9-12 taking online courses through virtual schools make up 85% of the total enrollments, but most state programs serve grades 6-12. Based on a national student survey (Evergreen Education Group, 2015), 47% of students in grades 9-12 pursue online learning to access courses not offered at the school, and 43% choose to take courses online to be able to work at their own pace. Forty-two percent of students in grades 6-8 cited the desire for extra help as the major reason for choosing an online course.

In a national survey that examined the needs, attributes, and preparation/training of 325 K-12 online teachers, Archambault and Larson (2015) found that teachers decided to teach online for economic and innovative reasons. Online teachers reported a scarcity of classroom jobs, the need to supplement their income, flexibility to teach both face to face and online, retirement income, mobility to work anywhere, and the ability to work from home while saving on gas and daycare. Teachers also expressed a love of both technology and teaching. They preferred, appreciated, and believed in this new process for transferring knowledge, valued the efficiencies and leverage provided by technology, and preferred to focus on teaching rather than student discipline and administrative duties.

Teachers reported the need for online teachers to have strong skills in communicating through interactive technologies and a belief that online teachers should have organizational skills to assure that students, their engagement, their work, their progress, and their experiences are consistently monitored with corrective or reinforcing feedback when required (Archambault & Larson, 2015). Online teachers also reported the importance of time management skills and the ability to multitask.

Despite the advances in online education, little is known about the preparation of those who teach K-12 online classes. Researchers agree that K-12 online teachers lack both theoretical and practical understandings of teaching and learning online (Smith, Clark, & Blomeyer, 2005). Kennedy and Archambault (2012b) reported that only 1.3% of teacher preparation programs prepared teachers in settings other than traditional, brick-and-mortar classrooms. Only a limited number of teacher preparation programs addressed methods and techniques required to teach online, and even fewer offered online field placements for preservice teachers (Archambault & Larson, 2015).

Kennedy, Cavanaugh, and Dawson (2013) argued that past online learning experiences for online teachers often involved poor instructional design and an absence of instructor-to-student or student-to-student interaction in online environments. Potential online teachers may, thus, think that online learning is only what they have come to know in their own experience.

Much of online education research in the prior decade focused on online students and their perceptions of online learning and the quality of K-12 online programs, rather than on the teachers and their education and training to teach online courses effectively (Rice, 2006). More recently, Archambault and Larson (2015) found that K-12 online teachers, for the most part, received training to teach online after graduation while working in the field.

Rice and Dawley (2010) studied online professional development for K-12 online teachers and noted that 25% of new online teachers reported receiving no training. Additionally, only 12% of new online teachers reported receiving college or university training, compared to 43% of teachers who had 6-10 years of experience.

When technology courses are compulsory in teacher education, their focus, at least as determined more than a decade ago, has been more on software applications than on technology-infused curriculum design (Jacobsen, Clifford, & Friesen, 2002). Dede (2014)

recommended that professional development should make use of digital teaching platforms and immersive authentic simulations that demonstrate opportunities for teachers to provide their students.

As education changes, teacher educators must also change, which requires an alteration in teacher preparation programs. The need for teacher preparation programs to train teachers in the online setting is apparent. Online and blended programs for teacher development can draw upon resources that are not available locally, provide just-in-time support, and offer chances for teachers to connect with each other over time, building professional learning communities that often help individual teachers to reconsider their core beliefs about education (Dede, 2014).

Theoretical Framework

This study was grounded in the theory of situated cognition (Brown, Collins, & Duguid, 1989). Situated cognition involves knowledge that is situated in an authentic learning environment, or ordinary practices of the culture. Situated cognition emphasizes interactions between the learner, other learners, and tools in a sociocultural context. These interactions take place in the context of practice and are characterized by modeling of both mastery of practice and the process of gaining mastery (Jacobson, 1996). The concept of situated cognition posits that learning does not happen in dependent isolation or only inside a person's head (Hansman & Wilson, 2002). The nature of the interactions among learners, the tools they use within these interactions, the activity itself, and the social context in which the activity takes place all shape learning and knowledge.

Wilson (1993) explained, "Learning is an everyday event that is social in nature because it occurs with other people; it is 'tool dependent' because the setting provides mechanisms...that aid and structure the cognitive process" (p. 73). Choi and Hannafin (1995) emphasized the importance of learning in real-life contexts, whereby knowledge is acquired by embedding the subject matter in the experiences of learners and by creating the opportunity for learners to interact in the context of real-life situations. As such, knowledge and learning are intertwined with the context in which they occur (Lave, 1988). The knowledge gained through learning in a situated context is real-life knowledge, reflecting the values of the learners themselves.

Cognitive apprenticeship is an important aspect of situated cognition. Cognitive apprenticeship supports learning by enabling students to acquire, develop, and use cognitive tools in authentic activities. Learning, both outside and inside school, advances through collaborative social interaction and the social construction of knowledge (Brown et al., 1989). During this social interaction, the novice learns from the expert as an apprentice, and the expert often passes down methods and traditions, skills, information, and experiences—a form of sociocultural learning. The expert is a practitioner of the skill and scaffolds the novice's learning.

Kennedy and Archambault (2012a) described virtual field experiences in relation to a cognitive apprenticeship and wrote,

> In a typical virtual school field experience, novice online teachers are matched with K-12 online cooperating teachers who serve as their mentors throughout the experience. This relationship can be likened to that of a cognitive apprenticeship, where the novice online teachers observe the online learning environment while the cooperating teachers model their effective online teaching strategies, provide scaffolded support, offer specific feedback for improvement, and make their expert

tacit knowledge explicit; in conjunction with this learning, novice online teachers have the opportunity to identify and reflect on the ideas they learn. (p. 36-37)

Social cognition has implications for the design and development of classroom instruction and educational technology (Altalib, 2002). In educational technology, situated cognition has been adopted as a valid and useful tool for computer-based instruction, the design of technology, and the use of technology to enhance the teaching process (Altalib, 2002; Hansman & Wilson, 2002). With situated cognition, video and audio recorders, computers, and virtual reality devices can be used to promote reflection and coaching because "knowledge must be learned in context" (McLellen, 1996, p. 12).

Methodology

The research question was designed to examine the experiences of preservice teachers who completed student teaching in dual settings, online and on campus. A case study was the most appropriate methodology, because case study research excels at helping others understand complex issues or objects and can extend experience or add strength to what is already known through previous research (Soy, 1997). Case studies permit investigations of otherwise impractical situations, help generate new ideas, and allow researchers to explore topics in far more detail than might be possible if they were trying to deal with a large number of research participants (McLeod, 2008).

A key strength of the case study method involves using multiple sources and techniques in the data gathering process, which strengthens the study by providing opportunities for triangulation. Tools to collect data can include surveys, interviews, documentation review, observations, and physical artifacts. Case studies also use field notes and databases to categorize and reference data, so that it is readily available for subsequent reinterpretation. Field notes record feelings and intuitive hunches, pose questions, document work in progress, and record testimonies, stories, and illustrations (Soy, 1997).

Data from this study were collected throughout each of the student teachers' 15-week semester of student teaching and included discussions with the student teacher supervisors, cooperating teachers, and student teachers; student teacher artifacts; and electronic survey transcripts. An open-ended web-based survey was administered to student teachers after they completed their virtual field experience. The survey included five questions and an item that allowed student teachers to write additional comments.

Data were coded and analyzed for themes through grounded theory methods (Strauss & Corbin, 1990). Coding allowed us to identify recurring patterns in the data by categorically marking units of text with codes. We coded the data separately and shared the results with each other at the end of the study. We compared our analysis of data, which resulted in the merging, modification, and clarification of codes (as recommended in Dillon, 2012) until we agreed on our final list of codes. Triangulation was used to validate the findings (as in Patton, 2001).

Context

This study occurred at a 4-year public college located in the U.S. Southwest, where approximately 50 student teachers graduate with a teaching degree each year. Both authors of this article worked at the college, one as a professor (Kevin) and the other as the coordinator of student teaching (Lori), and had 13 years combined experience teaching online.

Students in the school of education are required to student teach for 15 weeks during their final semester in the program. Traditionally, student teaching placements have been on campus in K-12 settings. With the increase in online teaching and learning, however, the school of education chose to expand and enrich student teaching by providing experiences on campus and online.

In 2013, the college established a partnership with a grades 6-12 virtual high school located in the same city as the college. The virtual high school is a full-time school with nearly 12,000 online course enrollments (in academic year 2014-15). When the school of education decided to pilot online student teaching, we incorporated both on-campus and online student teaching into one semester. Teaching on campus cannot be completely replicated in an online-only environment.

Kennedy and Archambault (2012b) argued that K-12 online education will not completely replace traditional face-to-face learning. Traditional and online learning can be combined to provide the best educational experience possible for K-12 students. Students in this study benefited from experiencing both settings because local, traditional schools typically hire our graduates.

Participants

Seven student teachers participated in this study, of whom five were female and two were male. Two were English majors, two were mathematics majors, two were history majors, and one was a biology major. Student teachers were selected using criterion sampling (Patton, 2001). They had to be enrolled in the student teaching 12-credit seminar, be interested in online teaching, and have passing Praxis scores, a GPA above 3.0, and strong communication, writing, and technology skills.

All student teachers completed their student teaching at the same virtual high school during various semesters between fall 2013 and spring 2016. Student teachers did not receive training from the school of education on how to teach online. They were required to complete one educational technology course and were encouraged to complete courses for their technology endorsement. No one from this study received the technology endorsement.

Procedure

Student teachers worked with their virtual high school cooperating teacher as a teaching assistant for the first few weeks of the semester until virtual high school staff trained them on the procedures and technical aspects of teaching online. During that time, student teachers created an introduction video of themselves, graded papers, entered grades into the learning management system (LMS), and became comfortable with required hardware and software to teach online.

Initially, student teachers met with their cooperating teacher daily, but as student teachers became more comfortable with the virtual environment, they worked from home and they met less often. The cooperating teacher retained full access to everything that the student teachers did online during the semester. All student teachers had an additional cooperating teacher at their brick-and-mortar school.

Student teachers taught two on-campus classes at one of our partnership brick-and-mortar high schools. The two classes were scheduled back to back, usually in the morning, which allowed the student teacher to arrive early and prepare with the cooperating teacher. After

teaching two on-campus classes, student teachers traveled to the virtual high school building. The number of online classes that student teachers taught varied depending on class size. For example, some classes had 150 students and, in those situations, the student teacher was assigned only to one class. Other online classes were smaller, and in those situations, the student teacher taught one class and served as a teaching assistant in other classes. Student teachers spent all 15 weeks in this dual placement.

Student teachers facilitated weekly live online sessions that all of their students were required to attend. During this time, they connected with students, provided further clarification on course materials, answered questions, and encouraged students to participate more fully in the class. Student teachers graded all assignments and responded to students' email. They made telephone calls to students and parents to ensure that students were staying on task. Student teachers met with students who needed additional help either online or at the virtual high school student center.

A student teaching supervisor from the college was assigned to evaluate each student teacher. The supervisor was required to complete a minimum of eight observations of the student teachers at the brick and mortar school. Since the virtual school had no physical classroom, observing online student teachers required some adjustments. Student teachers took an active role in the observations. They were required to take screenshots of various items and artifacts and send them to their supervisors. These artifacts included assignments and projects created by student teachers, examples of their students' work, and gradebook, rubric, and announcement screenshots. They also submitted screenshots of discussion threads and feedback that they provided students.

The student teaching supervisor also relied on the cooperating teacher to collect and send additional screenshots, a process that ensured the supervisor saw a true representation of the student teacher's work and not only the student teacher's best examples. Student teachers were required to send the URL of their live sessions to their supervisor. Supervisors had the opportunity to attend live sessions, which was recommended, and were able to view the recorded sessions at a later time. Supervisors met with student teachers every other week to view completed assignments posted to the LMS. This process allowed supervisors to see all feedback and grading completed by the student teachers.

Student teachers received an abridged copy of the International Association for K12 Online Learning's (iNACOL, 2011) *National Standards for Quality Online Teaching*. Student teachers used the iNACOL standards to evaluate their own teaching each week and discuss their progress with their supervisor. Student teachers also attended weekly 3-hour seminars throughout the semester taught by Lori, the co-author of this article.

Results

Student teachers shared their experiences teaching online and on campus and discussed the benefits of online student teaching, the challenges that accompanied their online student teaching, the support they received from their cooperating teachers, student engagement, and whether they were likely to teach online after graduation.

Benefits of Online Student Teaching

Five themes emerged from the data on the benefits of student teaching online. They included (a) curricular development, (b) classroom management, (c) parental involvement, (d) flexible work environment, and (e) differentiated instruction.

Curricular Development. Student teachers were not involved in curricula development for their online student teaching. They agreed that not writing the curriculum was a major benefit of online student teaching. Although they were responsible for designing weekly lessons for live sessions and creating new approaches to deliver the content, they agreed that these tasks were not nearly as time-consuming as daily planning of entire lessons for an on-campus class. "The [online] schedule is flexible," stated one student teacher. Another student teacher explained, "In virtual student teaching, you do not have to write lesson plans. You have more 1 on 1 time with the students, and can find resources or tips for each individual student based on their unique needs."

Student teachers also acknowledged that a "premade" curriculum can be restrictive and often requires effort to unpack the lessons to understand them. Student teachers acknowledged that they supplemented the online curriculum, which was identified as a benefit to a curriculum that they did not design. Student teachers also noted that since the online curriculum was already developed they were able to focus more attention on lesson planning for on-campus classes.

One student teacher enjoyed the prescribed curriculum and did not believe it was too restrictive. She argued that the grading rubrics provided by the school allowed teachers to grade subjectively. She wrote, "If an assignment did not fully follow the directions but showed creativity and mastery of the subject, then we could grade them based on that. I really liked that students could turn in creative assignments."

Classroom Management. Not surprisingly, student teachers said they felt that a lot of their time in the on-campus setting was spent on classroom management. Students argued that the types of classroom disturbances seen in classrooms did not generally exist online, and they felt a lack of behavioral issues online was a benefit of online student teaching. One student noted that when students complain or disturbances occur, they are easier to deal with online:

The nice thing about online is that time is not wasted bringing students back to task or in explaining why this assignment is important. If students do not like the work, the teacher does not really have to listen to complaining or have to prevent the ring leader from spreading dissent. Don't get me wrong, they still complain about assignments, but it is in emails or in reflections. This is easier to deal with.

Parental Involvement. Another benefit of online student teaching described by student teachers was the high level of parental involvement with online courses. Keeping parents informed of student progress at regular intervals is a requirement at the virtual high school, thus assuring that the parents are involved in their child's education and leading to better relationships between the students, teachers, and parents. One student explained,

I feel I have a better relationship with parents. One can easily get to know parents and the student just from the phone and [computer] screen. All together it is great practice in communication, especially since you have to try harder to make that connection.

Another student said, "The power of communication with parents and students is essential, especially within a virtual classroom. The way I communicate online must be spot on since there is room for miscommunication. I find that I choose my words more carefully."

Flexible Work Environment. Student teachers found that having the flexibility to grade student work and communicate with students at the touch of the keyboard was also a benefit with online student teaching. "The ability to grade anytime, anywhere is

awesome," said one student. "I never lose assignments or spill my coffee on them." When student teachers found something online that they thought would help students understand a concept better, they would send the information out as an email. Students also enjoyed that all resources, gradebook items, student work, and the curriculum were in one location, the LMS.

Differentiated Instruction. Being able to engage struggling students in individual, differentiated instruction was another benefit reported by student teachers. Student teachers stated that time spent on the computer exposed them to online tools and resources to differentiate their lessons. They cited this benefit as one of the most important benefits of online student teaching. They did not realize that so many resources existed on the Internet that could motivate and engage students in learning. They found that educational games, tutorials, and videos help students better understand concepts.

Student teachers agreed that teachers who leave the online environment to teach on campus or teach hybrid courses take technology skills and knowledge with them and ultimately become better teachers. Student teachers said that the technology used online improved their effectiveness at teaching in their on-campus classes.

Challenges of Online Student Teaching

Four themes emerged from the data on the challenges of online student teaching. They included (a) motivation, (b) ongoing communication, (c) time management, and (d) rapport building with students.

Motivation. Survey data reveal that student teachers found motivating students online to be challenging. Statements included the following:

- "Many students online do not complete the required work on time, and it is challenging to increase their participation."
- "Some students seem bored with the content and online discussions."

Another student teacher said that she wished she had more engaging activities and ideas to motivate her students online. She admitted that she learned and observed a lot of strategies and activities from her teacher preparation program but could not find ways to make them "fit" online. Without face-to-face interaction, motivating students often involved making phone calls to students and sending students text messages and emails.

Ongoing Communication. Having to make numerous parent and student phone calls was frustrating and a challenge for student teachers:

- "There are higher demands for direct contact with students through phone calls that take a lot of time."
- "Some students do not do anything for the whole semester, and I have to keep calling them and they never answer. In an on-campus setting, I can talk to them and encourage them."

It is easy for students to fall off pace, not pay attention, and get lost in an online class, said another student. "I have learned that calling or emailing students weekly to check on their progress is essential," she said.

Time Management. Time management was another challenge for student teachers, mainly because of their dual placements. One student noted that planning a lesson online was time consuming, because it needs to be interactive. Another student added that completing all required tasks in a given week for online teaching was too overwhelming:

> I needed to set a schedule and follow it. I grade, close out the grade book, do live sessions, contact failing students, and document everything, which shows that we are paying attention to student progress and are actively striving to ensure their success.

Student teachers also commented that continuously grading large volumes of student work and giving constructive comments that encouraged deeper thought and stimulated interest in the subject was time consuming. "It was hard to find a balance between giving each student insightful comments and the amount of time it took to do this for 300+ students," said one student.

Another student described her struggles and perseverance to strive in both teaching environments:

> It is a lot of work coming up with lessons and grading papers for a brick and mortar school along with learning the online school. I had well over a hundred students just for the online school, and there was constant grading, plus planning the weekly live sessions. Those took me hours and hours to prepare. I did get the hang of it, and I wasn't quite so overwhelmed after a few months.

Building Rapport With Students. Initially, student teachers found building rapport with students to be difficult. One student said she mastered establishing rapport with her on-campus students and admitted that she often becomes attached to her students, but building rapport online was difficult: "I didn't guard myself. Since I didn't see them, I wouldn't have to worry about getting involved with them. But when you call them weekly or send emails, you learn things about them…. Planning to not get involved doesn't work."

By the end of the semester, all student teachers were able to make some meaningful connection with their students. In fact, the number of online students who shared more personal information than their on-campus students surprised most student teachers. A number of online students described experiences in which they were bullied or rejected in a traditional school and seemed to appreciate and need the personal connection that the student teacher provided. One student teacher explained,

> Even though I do not see my [online] kids every day, I feel like I know them better than face-to-face students, but I had to make a conscious effort to get to know them. I really read their writings and discussion posts, because this is how I get to see their personalities and see their progress.

Support From Cooperating Teachers

One theme, surface mentoring, emerged from the data on the support student teachers received from their cooperating teachers. All student teachers felt that they received proper support from their online cooperating teachers. This support involved advice on technology, the delivery and content of lesson plans, timely responses to email, and being available by telephone, email, and instant message. One student noted, "If my cooperating teacher was absent, I could call and speak to another member of the department. Support was always available." Another student said that she visited her cooperating teacher every

day in the beginning of the semester until "all kinks were ironed out" and then emailed each other daily for a couple of weeks thereafter to solve problems.

Student teachers agreed that discussing the premade online curriculum with the cooperating teacher before teaching it is essential. The cooperating teacher may have different goals and timeline to move the curriculum along. Student teachers felt the support they received allowed them to understand the curriculum better.

Despite their busy schedules and other responsibilities, student teachers said the cooperating teachers never made them feel like they were on their own. One student summarized her experience as follows:

> My virtual [cooperating teacher] is always in contact with me and really trained me well and never took no for an answer. She never asked if I was ready; she made me do it. She made sure I was trained and then sent me off. She definitely gave me all the support I needed and if I felt I was in a situation I could not handle, she walked me through it.

Student Engagement

All seven student teachers (100%) reported no difference in the levels of student engagement in their online and on-campus courses, for example,

> Regardless of setting, you will always have students who do not participate and some who require constant redirection to their work or to catch up. What is interesting is that I found the online students were more likely to risk participation as it was more anonymous since they could not be seen or heard, only read.

Another student teacher said, "Students are the same everywhere. Some are involved and turn in amazing work and others turn in work that would not be acceptable in elementary school, and others turn in nothing."

Another student teacher commented on students not completing work and offered her own perspective on engagement:

> In an in-person class, many students are choosing not to pay attention or do the work, and there are actually quite a few students in the virtual setting that choose to do the same thing. Engagement in a lesson doesn't necessarily depend on the lesson every time, it depends on the student and their desire to be engaged and take something away.

When asked if student teachers would teach online after graduation, three student teachers (43%) said they would prefer online teaching at a virtual school, and four student teachers (57%) said they would prefer both environments. Those who chose online teaching explained that they would receive a structured curriculum that is set for the semester or year. One student teacher chose online teaching because of her love for technology and the ability technology has to reach students.

Those student teachers who chose both settings explained that they can connect and interact more with students on campus. A student commented that she felt more connected with her students and their lives when she gets to see them every day. Another student said, "It is easier to assess student comprehension face-to-face during lectures, but student work

is similar in both settings." A third student took a realistic approach to her response and stated:

> I loved my Virtual Student Teaching Experience, and I would love to teach virtually. Unfortunately, there are not very many positions for this. I also really enjoy interacting with the students. I like to do hands-on activities, and this isn't possible in a virtual setting. Choosing one of the settings over the other is incredibly difficult. There are challenges and benefits in each, and ideally, I would have a bit of both of them in my classroom.

Discussion

Benefits of Online Student Teaching

Having a lack of behavioral issues online was reported as being a benefit of online student teaching. In an on-campus classroom, a student teacher does not generally need to call or email the student. Directions, encouragement, discussions, and follow-up can be done in class or before or after school but not in an online environment. The online student teacher can send out a single announcement or instructions to all students but may need to answer ongoing follow-up questions related to the announcement or instructions.

Moskowitz (2016) said that patience and effective communication are essential skills needed to teach online and should be discussed during teacher preparation training. Strong communication skills are equally important for both on-campus teachers and those teaching online. Student teachers in this study had to make numerous, time-consuming telephone calls to parents and students to keep students on task with their studies.

Student teachers became frustrated with this responsibility. Communicating at a distance is critically different from communicating with students face-to-face, as neither the student nor the teacher has access to the rich nonverbal cues and feedback from human communication (Archambault & Larson, 2015).

High parental involvement was another benefit of student teaching online. Individual parent contact in an on-campus classroom is fairly minimal. A parent may be contacted directly if there is a behavior problem, but otherwise, few phone calls are made to parents. Parents from the virtual high school in this study were regularly kept informed when their child was not keeping pace with the lessons, so parents could build strong and meaningful connections to their child's education and build positive relationships with the school and teacher. Klein's (2006) research confirmed that parents of students who attend virtual schools had a high regard for the teachers and had developed strong rapport with them, which they believed facilitated student achievement.

Student teachers enjoyed the flexibility of grading students' work from anytime, anywhere and benefited from the ability to send information quickly and efficiently to students. Online student teachers needed to be organized so they could stay on top of grading, ongoing communication with students, and missing work. Preparing live weekly sessions could be challenging for student teachers. They may have had students working on the same topic but at different stages of the learning process. Student teachers had to judge what was important to discuss in the weekly live session, based on what they saw in the weekly assignments that students submitted and read on the discussion board.

Being able to engage struggling students in individual, differentiated instruction was a benefit reported by student teachers. Online student teachers had more opportunities to

find online resources for individual students based on their unique needs. Based on survey data, online student teachers were comfortable on the computer, obtained enhanced digital literacy skills, and were more likely to use the resources they found online in their classes. Preservice graduate teachers who have completed virtual field experiences online also reported similar benefits, notably gains in their ability to provide explanatory feedback, provide clear instructions, meet the individual educational needs of students, and to differentiate instruction (Wilkens et al., 2014-2015).

Challenges of Online Student Teaching

Although student teachers were responsible for designing weekly lessons for live classes and creating new approaches to deliver content, they were not required to develop the curriculum for the semester, which was identified as a benefit for online student teachers. This response may not, however, reflect the reality of student teachers who are hired after graduation to teach at a brick-and-mortar school, and may become a challenge for students. They may enter their first year of teaching with a deficit in understanding program and curricular development.

This lack of understanding may affect writing objectives, identifying state and national standards, and creating assessments. Additionally, a prescribed curriculum may not reinforce meaningful uses of technology in the classroom that support content and pedagogy. Technology may simply be used as an add-on in isolation from the content and pedagogy.

Student teachers found motivating online students to be challenging. Without on-campus interaction, motivating students often involved making phone calls to students and sending students text messages and emails. This task was not only time-consuming, but also required that comments be written in a way that encouraged students to work harder, turn in assignments in a timely manner, and reach their fullest potential.

Rose and Adams (2014) discussed the pedagogy of care for online instructors and argued that the obligations of the online teachers include not only care for the students, but also for the course itself: the technological artifact, with its seemingly endless demands for their attention. For the face-to-face teacher, class preparation is an activity that, by definition, takes place prior to the class, in preparation for classroom interactions with the students. For the online teacher, however, preparation is ongoing, a ceaseless tinkering to deal with technical issues and ensuring that discussions and learning activities run smoothly.

Because of dual placements, time management was another challenge reported by student teachers. Teacher educators should keep in mind that online student teachers with dual placements have many responsibilities in both their online and on-campus environments, and these responsibilities may differ. Keeping a schedule and meeting requirements of both settings involves organization, preparation, and time management. Having to grade weekly in two different grading programs, prepare lessons for an on-campus class, record live sessions for an online class, and contact online students requires more juggling than most student teachers are asked to do (Feher & Graziano, 2016).

For the online teacher, the duties of reading and responding to discussion posts may be experienced as a continuation of an already busy day into the evening and night. When the learning environment is open for business 24 hours a day, 7 days a week, teachers feel they are always on call, expected to respond promptly to communications from students. The 24/7 demands for care imposed upon online teachers create a tension between their instincts to assist and attend to their students' needs and the imperatives of self-care (Rose

& Adams, 2014). Discussing time management issues during student teaching seminar may help student teachers learn from their colleagues and share ways to manage time more efficiently. Also, a seasoned cooperating teacher and supervisor may provide advice on how to manage time properly.

Student teachers believed that grading large volumes of student work and giving constructive feedback is time consuming. Many online classes have 100-150 students, yet student teachers try to individualize their responses. Student teachers should be prepared ahead of time that providing meaningful feedback is an ongoing demand, so they can work on this skill. Providing examples of individualized, insightful comments is also beneficial. A good cooperating teacher and supervisor should model this skill and offer suggestions for improvement.

Student teachers also said that building rapport with students was an initial challenge. Similar research from Hawkins (2011) supports this finding. Hawkins found that online teachers felt disconnected from their students, the profession, and their peers and attributed this feeling to limited interaction with students and other colleagues. Wilkens et al. (2014-2015) reported significant declines in preservice graduate teachers' confidence in their abilities to prevent student isolation, build trust, or create a sense of "family" (p. 154).

The student teachers in this study acknowledged that, with time, their online students began to share more personal information with them. Perhaps the lack of on-campus contact, established trust and respect, or simply being an objective listener for only one semester were factors that enabled some students to feel more comfortable sharing personal information.

Klein (2006) found similar results from virtual teachers who reported that their online roles were even more personal than their roles at traditional schools. Teacher explained that they got to know more about their students because of individualized learning opportunities.

Support From Cooperating Teachers

All student teachers felt that they received proper support from their online cooperating teachers. This support included advice on technology, the delivery and content of lesson plans, timely responses to email, and being available by telephone, email, and instant message. Such support is often referred to as surface mentoring, where mentoring is superficial and focuses on just-in-time, day-to-day survival skills (Kennedy, Cavanaugh, & Dawson, 2013). No student teacher received mentoring beyond the surface level to include a "critical evaluation of their professional identity development" (Kennedy et al., 2013, p. 64)

Kennedy et al. (2013) asserted that communication with a supervising teacher is key to students' experience in a virtual school field placement. They studied the experiences of three preservice graduate teachers who voluntarily participated in a virtual field placement with online teachers. They found that communication must be constant and deep for the preservice teachers to feel their relationship with their supervising teachers advanced their professional development as future teachers. The preservice teachers desired to hear what life was like for the supervising teacher as an online instructor in the K-12 environment and wanted to understand how they could fit into that new learning environment.

Ongoing support and critical mentoring from a cooperating teacher are essential to a successful online student teaching experience. Effective mentors are open to new ideas and

allow their student teachers to be creative while using constructive comments to help them succeed (Feher & Graziano, 2016). Cooperating teachers, however, may be effective teachers but not the right mentor.

We experienced an ethical dilemma with a few cooperating teachers who had negative attitudes about working with student teachers, did little to no modeling, and were overly critical of students and teaching. In these cases, the college supervisor and coordinator of student teaching increased their observations of the student teachers and decided to place the student teachers with other cooperating teachers at new schools. This approach alleviated potential conflict between the student teacher and the cooperating teaching.

Removing student teachers for reasons beyond their control is stressful for the student teacher, K-12 students, and school staff. In every situation where a student teacher was reassigned to a new placement, the second placement turned out to be a better fit. A positive experience with a cooperating teacher could make or break the online student teaching experience and either encourage student teachers to pursue online teaching as a career or run away from it, never to be seen again.

Student Engagement

All student teachers spoke about students' participation, or lack thereof, and reported no difference in the levels of student engagement in their online or on-campus courses. Rather than thinking of engagement as simply showing up for class, student teachers need to identify ways to involve their students online actively with the knowledge and skills they have learned. For students, this could involve blogging, reciprocal teaching, debating, problem-solving, evaluating, participating in social media chats and tweets with professionals in the field, using online collaborative tools, or using immersive technology to complete assignments. Students may also interview experts in the community and take the information back to the discussion board in their learning management system to facilitate a discussion.

The idea is to make online class time so engaging that it will be difficult for students not to participate. Online teachers can be challenged because they cannot see their students and read their reactions and body language. Further, students who believe online learning is easier than on-campus learning arrive online prepared to be disengaged.

Limitations

A few limitations in this study are acknowledged. First, the number of participants in this study was low (n = 7); therefore, results of this study should not be generalized to the population as a whole. Second, the survey used in this study was not validated by outside experts. Outside experts may have identified misleading, confusing, or leading questions that we overlooked or did not notice due our involvement with the study. Third, student teachers may have shared information with us that they thought we wanted to hear rather than sharing factual information. Fourth, survey research consists of self-report rather than the measurement of observable behavior and is susceptible to a certain degree of bias (Archambault, 2011). Last, only one of us (Lori) taught the student teaching seminar and interacted weekly with the student teachers. If student teachers did not respect Lori or value her teaching approach, advice, and feedback, their participation in the study could have been limited.

Recommendations

Based on the study findings and review of the literature, we offer the following recommendations on how teacher preparation programs can get started with or improve online student teaching experiences (Feher & Graziano, 2016).

1. Teacher preparation programs should utilize a review process to select qualified student teachers. Faculty and staff from the virtual school should be involved with the review of applications.
2. Teacher preparation programs should select exceptional supervisors who are comfortable with technology and are computer savvy.
3. Teacher preparation programs should carefully examine the online program at the virtual school where student teachers will complete their student teaching. Selecting a virtual school where the curriculum and content lessons are predesigned may be a critical factor in selecting a school.
4. Teacher preparation programs should select quality mentor teachers. Meeting with the mentor teachers prior to student teaching is important to ensure that they are not only effective teachers, but also possess attributes necessary to be effective mentors. They should be willing to share their expertise and skills, have a positive attitude, and be enthusiastic about their job. Mentors are open to new ideas and allow their student teachers to be creative while being able to use constructive comments to help them be successful. Mentors should be approachable, compassionate, and fair. They should also be teachers who are recommended by the principal based on professional standards.
5. Teacher preparation programs should offer an online teaching methods course to prospective online student teachers. Since this study was conducted, our institution began offering an online teaching methods course for in-service and preservice teachers interested in online teaching.
6. Teacher preparation programs should offer ongoing professional development to teacher educators that involves not only technology skills, but also technology integration. Professional development may involve attending local and national conferences, participating in brown-bag luncheons with colleagues, or simply sharing ideas, strategies, and resources found on the Internet via a blog, wiki, or electronic newsletter.
7. Teacher preparation programs should embed technology, pedagogy, and content across the curriculum, including field experiences, and encourage teacher educators to teach technology courses.
8. Teacher preparation programs should require preservice teachers to take a minimum of two online courses from different faculty members before student teaching.
9. Teacher preparation programs should be familiar with K-12 online teaching standards, such as iNACOL's National Standards for Quality Online Teaching (International Association for K-12 Online Learning, 2011).
10. Teacher preparation programs should lead efforts to develop a set of technology competencies for online teacher educators. Faculty, researchers, and educational leaders should be involved in this process.
11. If teacher preparation programs choose to use dual placements for student teaching, they should work out a schedule that allows the student teachers to manage their time efficiently. Student teachers should be able to meet and collaborate with their cooperating teacher in a face-to-face setting, especially for initial trainings.

Online student teaching is a promising approach to prepare preservice teachers to become innovative, forward thinkers. Teacher preparation programs should take an active role in

developing and modeling best practices that engage and support online learners. Our recommendations should be shared with faculty and staff, considered with strategic planning, and used to set direction as teacher preparation programs take advantage of the rapid growth of online teaching and learning and modern advances with technology.

References

Allen, I. E., & Seaman, J. (2013). *Changing course: Ten years of tracking online education in the United States*. Oakland, CA: Babson Survey Research Group and Quahog Research Group.

Altalib, H. (2002). *Situated cognition: Describing the theory*. Retrieved from ERIC database. (ED475183)

Archambault, L. (2011). The practitioner's perspective on teacher education: Preparing for the K–12 online classroom. *Journal of Technology and Teacher Education, 19*(1), 73-91.

Archambault, L., & Larson, J. (2015). Pioneering the digital age of instruction: Learning from and about K–12 online teachers. *Journal of Online Learning Research, 1*(1), 49-83.

Brown, J., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher, 18*, 32-42.

Choi, J., & Hannafin, M. (1995). Situated cognition and learning environments: Roles, structures, and implications for design. *Educational Technology Research and Development, 43*(2), 53-69.

Dede, C. (2014). *The role of digital technologies in deeper learning. Students at the center: Deeper learning research series.* Boston, MA: Jobs for the Future.

Dillon, D. R. (2012). *Grounded theory and qualitative research. The encyclopedia of applied linguistics.* Oxford, UK: Blackwell Publishing Ltd.

Feher, L., & Graziano, K. J. (2016). Online student teaching: From planning to implementation. In S. Bryans-Bongey & K. Graziano, (Eds.), *Online teaching in K-12: Models, methods, and best practices for teachers and administrators* (pp. 109-127). Medford, NJ: Information Today.

Greenberg, J., Pomerance, L., & Walsh, K. (2011). *Student teaching in the United States*. Washington, DC: National Council on Teacher Quality.

Hansman, C. A., & Wilson, A. L. (2002). *Situating cognition: Knowledge and power in context.* Paper presented at the annual meeting of the Adult Education Research Conference, Raleigh, NC. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.466.7037

Hawkins, A. (2011). *We're definitely on our own: Interaction and disconnection in a virtual high school.* Unpublished dissertation, Brigham Young University-Provo, UT.

International Association for K-12 Online Learning. (2011). *National standards for quality online teaching.* Retrieved from http://www.inacol.org/resource/inacol-national-standards-for-quality-online-teaching-v2/

Jacobsen, M., Clifford, P., & Friesen, S. (2002). Preparing teachers for technology integration: Creating a culture of inquiry in the context of use. *Contemporary Issues in Technology and Teacher Education, 2*(3), 363-388. Retrieved from http://www.citejournal.org/volume-2/issue-3-02/current-practice/preparing-teachers-for-technology-integration-creating-a-culture-of-inquiry-in-the-context-of-use/

Jacobson, W. (1996). Learning, culture, and learning culture. *Adult Education Quarterly, 47*(1), 27-41.

Evergreen Education Group. (2015). *Keeping pace with K-12 digital learning: An annual review of policy and practice* (12th ed.). Retrieved from http://www.kpk12.com/wp-content/uploads/Evergreen_KeepingPace_2015.pdf

Kennedy, K., & Archambault, L. (2012a). Design and development of field experiences in K–12 online learning environments. The *Journal of Applied Instructional Design, 2*(1), 35-49.

Kennedy, K., & Archambault, L. (2012b). Education programs offering preservice teachers field experiences in K–12 online learning: A national survey of teachers. *Journal of Teacher Education, 63*(3), 185-200.

Kennedy, K., Cavanaugh, C., & Dawson, K. (2013). Preservice teachers' experience in a virtual school. *American Journal of Distance Education, 27*(1), 56-67.

Klein, C. (2006). *Virtual charter schools and home schooling*. Youngstown, NY: Cambria Press.

Lave, J. (1988). *Cognition in practice: Mind, mathematics, and culture in everyday life*. Cambridge, UK: Cambridge University Press.

Levine, A. (2006). *Educating school teachers*. Washington, DC: The Education Schools Project.

McLellan, H. (1996). Situated learning: Multiple perspectives. In H. McLellen (Ed.), *Situated learning perspectives* (pp. 5-17). Englewood Cliffs, NJ: Educational Technology Publications.

McLeod, S. A. (2008). *Case study method*. Retrieved from the SimplyPsychology website: www.simplypsychology.org/case-study.html

Moskowitz, S. C. (2016). The online teacher: Skills and qualities to be successful. In S. Bryans-Bongey & K. Graziano (Eds.), *Online teaching in K-12: Models, methods, and best practices for teachers and administrators* (pp. 25-35). Medford, NJ: Information Today.

Patton, M. Q. (2001). *Qualitative research and evaluation methods* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Rice, K., & Dawley, L. (2010). *Going virtual! 2010: The status of professional development and unique needs of K-12 online teachers*. Retrieved from http://edtech.boisestate.edu/goingvirtual/goingvirtual.htm

Rice, K. (2006). A comparison look at distance education in the K-12 context. *Journal of Research on Technology in Education, 38*(4), 425-448.

Rose, E., & Adams, C. (2014). "Will I ever connect with the students?": Online teaching and the pedagogy of care. *Phenomenology & Practice, 7*(2), 5-16.

Smith, R., Clark, T., & Blomeyer, R. L. (2005). *A synthesis of new research on K-12 online learning*. Naperville, IL: North Central Regional Educational Laboratories.

Soy, S. K. (1997). *The case study as a research method*. Unpublished paper, University of Texas at Austin. Retrieved from https://www.ischool.utexas.edu/~ssoy/usesusers/l391d1b.htm

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage Publications.

U.S. Department of Education. (2016). *National education technology plan*. Retrieved from http://tech.ed.gov

Watson, J., Murin, A., Vashaw, L., Gemin, B., & Rapp, C. (2011). *Keeping pace with K-12 online learning: An annual review of policy and practice*. Retrieved from ERIC database. (ED535912)

Wilkens, C., Eckdahl, K., Morone, M., Cook, V., Giblin, T., & Coon, J. (2014-2015). Communication, community, and disconnection: Pre-service teachers in virtual school field experience. *Journal of Educational Technology Systems, 43*(2), 143-157.

Wilson, A. L. (1993). The promise of situated cognition. In S. Merriam (Ed.), *An update on adult learning theory. New directions for adult and continuing education, 57* (pp. 71-80). San Francisco, CA: Jossey-Bass.

Author Note

Kevin J. Graziano
Nevada State College
Email: kevin.graziano@nsc.edu

Lori Feher
Retired student teaching coordinator
Email: lori.feher@nsc.edu