"Simplicity is Key": Literacy Graduate Students' Perceptions of Online Learning

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Abstract
Even before COVID-19, literacy graduate coursework was increasingly offered online, replacing the traditional campus-based courses This study investigated how graduate literacy students perceive coursework in an online learning environment. This understanding is important because (a) student perceptions regarding online learning are critical to motivation and learning; and (b) faculty designing courses need to consider student voice in course development. This survey research queried literacy master's degree candidates their perceptions prior to and after taking online classes, their confidence levels using technology, and about the technological tools that have impacted their learning. Results indicated initial perceptions of online learning changed positively after engagement in coursework, but course design influenced collaboration and engagement. Statistical significance was found in changes in initial perceptions of online learning to a more positive overall feelings toward online learning. The results of this study raise important considerations for implementing online coursework for literacy graduate students.

Keywords: graduate, technology, student perceptions, online education, literacy

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In 2015, "of the three million graduate students enrolled in postsecondary institutions, 1 million, or 34.3 percent enrolled in at least some DE (Distance Education) courses" (Miller et al., 2017, p. 18). This means even before COVID-19, teacher educators had increasingly turned to distance education to meet their student's learning needs (Kentor, 2015). While online learning is not new, COVID-19 removed options for face-to-face teaching and made online learning the new normal in designing and implementing instruction. Faculty tasked with designing and implementing coursework for online delivery often tried to replicate face-to-face methods to online learning, which may not be appropriate in an online environment (Supiano, 2020).

As literacy teacher educators, we experienced the move towards online education prior to and during COVID-19. This group of educators began to question how students perceived this change to an online format and how students' ability to use technology influenced their perceptions of the learning experience. Essentially, what were students' perceptions of these online programs. Giving students a voice regarding their experience allows faculty to think more deeply about course design and creates an opportunity for improved methods for teaching. This paper explores graduate students' perceptions of online learning and the influences of technology in their online experience.

Literature Review

Online learning has been an option for students since 1989 when the University of Phoenix offered the first fully online degrees (Kentnor, 2015). Online teaching and learning are distinct from the face-to-face environment. In an online classroom environment, the learner is more active and in control of their learning experience while the faculty shifts towards more coaching and mentoring (Boettcher & Conrad, 2016). Students in higher education choose online learning platforms for multiple reasons including, but not limited to, flexibility, convenience, access, and personal health (Harris & Martin, 2012). The perceptions students have of online learning experiences are impacted by student attitude and digital literacy capabilities (Prior et al., 2016).

It is important that we focus on the perceptions of our students because of the unique nature of students in literacy education master's programs. Research by Money and Dean (2019) indicated that differences between populations of online students impacts online learning outcomes. Literacy graduate students are unique in that they are certified teachers (or eligible for certification) engaging in advanced studies in the teaching of literacy, a field in which they have some experience. Yet despite the uniqueness of this population, few researchers have focused on the investigation of literacy master's degree programs. Swaggerty and Broemmel (2017) examined the online learning experience preferences of students from one Master's in Reading Education program. They concluded that the strength in online course effectiveness was in communication and collaboration, shared feelings of membership in the online learning community, and the authenticity of assignments and course activities. Because this was the only study that specifically examined literacy education in an online environment, the field is ripe for learning more about students' perceptions of online literacy master's coursework.

In expanding on Swaggerty and Broemmel (2017), we take a broader and more current view as we sought to understand how candidates' perceptions of online literacy courses in 2020 before and after COVID-19 have been impacted by course design, self-efficacy, and perceptions of online learning (Prior et al., 2016), and the application of the literacy course to literacy teaching K–12.

Effective and Engaging Online Courses

Previous research on students' perceptions of online learning in education demonstrate that candidates prefer learning environments that engage them to develop content knowledge with opportunities for application. Throughout these experiences' candidates described the need for professors to engage directly with the community of learners in the course (Leader-Janssen et al., 2016). Faculty teaching online strive to engage students by designing classes that follow the key features of the Community of Inquiry (CoI) Framework (Garrison, 2017). CoI has been utilized to understand effective online teaching; the model uses the concepts of social presence, cognitive presence, and teaching presence to represent a meaningful learning experience (Garrison, 2017).

Social presence revolves around how students and instructors interact with one another and is characterized by how authentic online interactions feel. Rourke et al. (2007) found that social presence supported critical thinking and in turn then impacted cognitive presence. Cognitive presence refers to how learners can build meaning and knowledge throughout the course. The third aspect of the CoI framework, teaching presence mediates and regulates both social and cognitive presence (Akyol et al., 2009). Teaching presence is demonstrated by the instructional decision of the course instructor and its activities. A fourth factor has been added to the CoI framework, which is Learner Presence (Shea, 2012). Learner presence examines the relationship between a students' self-efficacy and their perception of an online learning environment. It is important in online learning in that the students who exhibited learner presence generated more knowledge (Shea et al., 2013), and is evident in more complex learning activities that promote collaboration and is correlated with course grades (Shea et al., 2012).

Self-efficacy and Perceptions of Online Learning

Shea and Bidjerano (2010) indicate that there is a positive relationship between elements of the CoI framework and self- efficacy. Self-efficacy is an individual's belief in their ability to succeed or fail in a task (Bandura, 1993). In an online learning environment, self-efficacy is central as students are not only engaged in a complex learning environment where independence is central but where their opportunities for interaction with others is limited to intentional practices (Peechapol et al., 2018). Students' self-efficacy in online classes is connected directly to their technology competency and experience with digital literacy. Learners' self-efficacy may lead to differences in help seeking behaviors and in turn engagement with the material (Shea, 2012).

Thus, candidates engaged in online learning need to have self-efficacy regarding both the focus of the course as well as with digital literacy. Digital literacy can be defined as having the attitude and ability to use digital tools in a variety of situations (Martin, 2006). Although many students are familiar with digital technologies and use them for their daily lives, they do not necessarily know how to use digital tools for learning (Gurung & Rutledge, 2014). Since we know that students with high self-efficacy regarding their digital literacy capabilities and online course work have demonstrated the ability to determine appropriate courses of action for learning (Zimmerman, 2010), and thus, we know that they are more likely to achieve academic success (Peechapol et al., 2018).

The way students perceive social interaction, sense of community, and their roles in achieving success in online learning (Fedynich et al., 2015; Sher, 2009; Swaggerty & Broemmel, 2017; Young & Norgard, 2006) contributed to their self-efficacy and satisfaction. Typically, there are three types of interaction: (1) student-instructor interaction; (2) student-student interaction; and (3) student-content interaction (Sher, 2009). Further, Fedynich et al. (2015)

found that the interaction between graduate students and the instructor has a major impact on their satisfaction. Students were highly satisfied with the clarity and organization of instruction using sufficient resources, which identified the instructor's role as being vitally important to students' satisfaction. Similarly, Young and Norgard (2006) demonstrated the students' needs in regard to interaction with professors and classmates and course content. Students also voiced the need to develop a consistent course structure across classes and to provide extended technical support hours. These are some factors that could influence online student learning and self-efficacy.

Connecting Online Learning to Field Experiences

Literacy Masters programs require that students engage in field experiences, teaching elementary and/or secondary students, as part of knowledge development. The value of field experiences in education (applied assignments/practice assignments) is an integral part of teacher education programs (Simpson, 2006) as teachers are exposed to different situations that prepare them or enhance their knowledge (Barbour et al., 2009). It is the "testing ground" for theory and practice (Simpson, 2006, p. 241) where students receive support and develop community within their teaching environment. Field experiences may look different in the online learning environment. This experience requires that teacher candidates engage in complex cognitive behaviors requiring self-regulation to attain teaching and social presence as teachers (Shea & Bidjerano, 2012). The online environment requires not just a different pedagogical approach but different ways of engaging. Prior to COVID-19, many literacy master's degree students did their field experiences in local schools and submitted some form of recording or were supervised remotely.

Although there have been field experiences offered virtually for some time (Kennedy & Archambault, 2012), these experiences were less common prior to COVID-19. Virtual field experiences require planning and executing instruction in a virtual setting and motivating distance students (Kennedy & Archambault, 2012). Waters and Russell III (2016) found benefits to virtual field experiences for teacher candidates enrolled in online classes for different reasons. First, for convenience, virtual field experiences are a "highly motivating factor" (p. 10). Virtual field experiences offer flexibility to meet home, work, and financial responsibilities. It also alleviates students from having to travel to schools and helps those who lack reliable transportation by conducting their field experience virtually.

The perceptions of literacy graduate students engaging in online learning are impacted by the course design, student self-efficacy, and the integration of field experiences. Using what we know from the literature, how do literacy master's students perceive these factors? Additionally, do these students see applications from their graduate classes to their K–12 classrooms? In this study we sought to answer these questions.

Methods

Seven researchers, each from different higher education institutions, joined together through a shared interest in online literacy graduate education at the Literacy Research Association annual conference. Our experiences as online faculty range from novices to 14 years of teaching in higher education. Our respective programs have existed online for a range of first time-implementation to online literacy programs in existence for 22 years. Researchers from this group develop and teach online courses, as well as belong to committees supporting online learning.

The purpose of this multi-institutional collaborative research project was to discern literacy graduate students' perceptions of their experiences in completing literacy coursework when enrolled using an online instructional format. Online coursework is defined for the purpose of this research project as instruction delivered as hybrid (face-to-face *and* online) or fully delivered in an online environment. The participants of the survey have all received or are eligible for their initial teacher licensure in either elementary or secondary settings. The initial phase of the study took place in February 2020, prior to the transition to online teaching due to COVID-19.

The 28-question survey collected demographic and institutional information, perceptions of online learning as related to efficacy, technology influences on learning, especially as they related to field experiences. The survey was a combination of 5-point Likert scale (1–strongly disagree, 2–disagree, 3–neither agree or disagree, 4–agree, and 5–strongly agree), multiple choice, and open-ended questions. Each researcher secured IRB approval following their institutional guidelines.

The survey went through an iterative process. In phase one, researchers met via video conferencing to discuss and create initial survey questions. The focus of these meetings was to align survey responses to the research question of perceptions of learning in an online environment. As the researchers in this study are all faculty, teaching graduate courses the goal was to discern if the transition to online learning impacted learning. The survey was then entered into Qualtrics for ease of distribution and analysis. In phase two, the research team members individually completed the survey to ensure alignment to the research question and theoretical perspective. Upon revisions, the new pilot survey was given to six graduate students from different institutions for additional input on question clarity and ease in completing the survey. Comments received from the pilot survey were used by the research team to improve question clarity and final edits were then completed.

In phase three, the survey was distributed to graduate students who were previously or currently enrolled in hybrid or online literacy coursework associated with each team member's institution. In addition, a call was emailed through the LRA Listserv for faculty assistance in sharing the survey with their online/hybrid literacy classes. Consistent with snowball sampling procedures (Coffey & Atkinson, 1996) both faculty and student participants were encouraged to share the survey link with colleagues that met the survey demographic requirement. In the final phase, four additional open-ended questions were sent to 41 participants who shared their email addresses and agreed to expand on their answers from the survey. Fourteen responses were received. These four questions focused on (a) advice for professors; (b) helpful online tools used in their K–12 classrooms; (c) aspects of coursework that help them become a better literacy teacher; and (d) comments on online literacy teaching and learning.

Participants

One hundred twenty-seven participants from 16 states completed the survey with all surveys usable as data points. A response rate is unable to be determined as this survey was distributed as a convenience sample through the research teams' institutions and the LRA Listserv. The responses then came through snowball sampling as literacy faculty were encouraged to share the link with other literacy faculty and with graduate students. These results attained through a convenience sample while not generalizable, do allow for a gathering of literacy graduate student perceptions. These perceptions become the foundation for literacy faculty to reflect on practice and consider how to best meet the learning needs of students. The participants ranged in age and teaching experience. Participants ranging in ages from 22 to 64,

with 37 as the mean age (see Table 1). One hundred twenty-one participants identified as female (93%), five identified as male (4%), and one participant chose not to answer.

Table 1
Age Range of Participants

Age range	Frequency, n (%)
21–30	39 (32%)
31–40	40 (32%)
41–50	26 (21%)
Older than 50	18 (15%)

Note. N = 123. Four missing data points.

Participants were also asked to indicate their years of teaching experience, which ranged from those being brand new teachers to three teachers with 26 years or more of teaching experience with a mean teaching experience of nine years (see Table 2).

Table 2
Years of Teaching Experience

Range of Years of Teaching Experiences	Frequency, n (%)
Less than 1 year	8 (6.3%)
1–5	41(32.5%)
6–10	34 (27.0%)
11–15	21 (16.7%)
16–20	12 (9.5%)
21–25	7 (5.6%)
26–30	3 (2.4%)

Note. N = 126. One missing data point. For ease in reporting, all participants in their first year of teaching counted this as zero years of teaching.

Seventy-six participants (60%) indicated they teach in a PK–5 grade setting, 32 participants (25%) teach in 6–12 grade settings, and 15% are not currently teaching. Responses were received from 16 different states. Participants were also asked if they were taking coursework in their state of teaching residency. One hundred thirteen were taking coursework in their state (89%) while 14 participants indicated they were enrolled in a program outside of their state residency teaching. Many of the participants understood that the coursework could lead to a literacy endorsement (111 participants or 87%), eight participants indicated the coursework did not meet endorsement requirements, and another eight participants were unsure if the coursework would lead to a literacy endorsement.

Findings

The increasingly more common online learning environments has changed how teacher educators consider avenues for student learning in the delivery of literacy coursework. Initial questions queried the category of online program enrollment with 77% of participants enrolled in completely online coursework and 23% in a hybrid program.

Perceptions of Online Learning

To understand the perceptions of the respondents before and after the survey, a question asked students to identify preference on the type of program for literacy learning. Participants were asked to identify their preferred method of learning with 50% of the students indicated they preferred a hybrid format, 22% favored face-to-face, and 28% preferred learning online. An ANOVA was conducted to analyze for differences in age group, teaching experience, and grade level teaching with no significance identified between any of these groups. In regard to having synchronous or asynchronous requirements for online coursework, 75% of the participants preferred courses designed for asynchronous learning (i.e., everyone may choose the time he/she/they want to work), and 25% chose a combination of synchronous and asynchronous format. However, this combination could be done in a face-to-face or virtual environment. Less than 1% of the participants chose synchronous courses (i.e., everyone is required to be online at the same time).

Table 3
Preference for Method of Learning (N=127)

Instructional Delivery Method	Frequency, n (%)
Hybrid	50%
Face-to-face	22%
Online	28%

The 127 participants were also asked to choose a course topic that had impacted their teaching practice. Twenty-six percent of the participants believed that a course focusing on intervention or working with at-risk readers had the greatest impact. Nineteen percent of participants reported content area literacy, and eleven percent found children's/adolescent literature were important. The least courses reported by the participants to be impactful to his/her/their practice were classes focused on digital literacies (2%) or assessment (3%).

Table 4
Course Topic Most Impacting Teaching Practice (N=127)

Course Topics	Frequency, n (%)
Working with at-risk readers	32 (5%)
Content area literacy	25 (20%)
Children/adolescent literacy	15 (12%)
Social and critical literacy	10 (8%)
Research	9 (7%)
English Language Learners	9 (7%)
Teaching writing	7 (6%)
Instructional coaching	6 (5%)
Assessment	4 (3%)
Digital Literacy	3 (2%)
Other	7 (5%)

Inferential statistics were used to determine the differences and relationships in the constructs of confidence and perceptions of online learning. The survey first sent out in February 2020 provided opportunities to compare pre-COVID-19 confidence and perceptions of online learning to face-to-face courses that went online around March 15. A Fisher's Z analysis was used to compare pre- and post-March 15 responses. One construct investigated was participants' perceptions of confidence in using technology in daily life, online learning, and teaching. Results indicated there were no changes in confidence in any of the above areas before and after the COVID-19 transition to all online teaching. Participants' responses were also analyzed for changes in initial and current perceptions on literacy courses. A paired samples t-test was conducted comparing perceptions of engagement at the beginning of taking online courses to current perceptions of enrollment in online courses. There was a significant finding of overall perceptions ($t = 6.572$, $p < .05$).

A Fisher's Z analysis was conducted to query perceptions of literacy coursework indicating significant relationship in the participants' pre- and post-coursework perceptions of online learning (.34, $p < .001$). The Fisher's Z analysis also found that there were no significant differences between the participants' current perceptions of online learning in relation to the grade levels they were teaching (-.45, $p = 0.78$). A chi-square analysis indicated a significant result on the relationship with the mode of learning (face-to-face, online, hybrid) and the number of completed online courses (18.043, $p < .005$). This result indicated as students completed more courses in a program, this increased the probability of a preference for hybrid instruction of learning.

Students were queried on their perceptions of online learning literacy course work using a Likert 1–5 scale (see Table 3). Prior to beginning literacy courses, 9% of the participants were not looking forward to the online experiences, 43% of the students had no idea what to expect, 44% of the students loved online learning depending on the instructional design, and 4% loved online learning no matter what the situation. However, after taking literacy courses online 7% were still not looking forward to online learning (down slightly from initial perceptions), 2% still had no idea what to expect, 83% of the students loved literacy online courses depending on the instructional design, 7% loved online learning no matter what, but a new result indicated that one person (<1%) hated the idea of online learning.

Table 5
Perceptions of Engagement in Online Coursework (N=127)

	Initial perceptions of online literacy coursework (Mean and Standard Deviation)	**Perceptions after taking online literacy courses (Mean and Standard Deviation)**
Hated the idea	0	1 (<1%)
Not looking forward to it	($M = 2.67$, $SD = 0.71$)	($M = 3.27$, $SD = 1.10$)
No idea what to expect	($M = 2.50$, $SD = 0.71$)	($M = 3.82$, $SD = 0.70$)
Love online learning depending on the instructional design	($M = 3.49$, $SD = 0.63$)	($M = 4.04$, $SD = 0.80$)
Love online learning no matter the circumstance	($M = 3.78$, $SD = 0.97$)	($M = 4.40$, $SD = 0.55$)

Course Design that Supports Online Learning

Course design that supports online learning included schedules (course calendars), time or pace flexibility, helpful course materials and/or tools, sequence and interaction structure, and application of course content in practice. Students' expectations of online learning or suggestions emphasized the importance of the professor (interaction, prompt feedback, and guidance), expectation of course materials (clear presentation and assessment, perfecting the practice, weekly timeline, videos or recordings, and authentic assignments), and supportive interaction with peers. Participants asserted the challenges of online classes containing unnecessary or worthless discussion board activities, lack of support (professor, program, college and university levels), hard-to-meet course requirements due to field components or the time due to the short length of courses (courses taking place in an accelerated semester—some online programs compress a semester into 5 weeks), and feedback that lacks comprehensive and personalized. Finally, participants asked for university support for online students by providing distal access to various campus resources from speakers to meetings.

The findings in this area were further explored in the final phase of the study—participants confirmed and/or clarified many of their survey responses. Students also offered advice to professors for constructive changes to online learning. There were a variety of suggestions, including ways to pace courses, the resources that are used in courses, and opportunities for engagement.

As to ways to pace courses, comments include providing course calendars to help students keep up with assignments and due dates: "My professors have given me calendars as well as the syllabus which I find extremely helpful. It helps me add reminders into my digital calendar and set reminders. I worry about making a mistake. The calendar helps me know I don't make a mistake" (Q1: 2).

Students appreciate structure in course navigation. As examples, they cited that having clear expectations for discussion boards and assignments is helpful. They want to know "why" they need to complete a particular assignment—otherwise it might feel like assignments were made "just to assign them" (Q1: 4).

Meanwhile, it was "very powerful" "to observe live or recorded lessons, along with concurrent discussions" as it taught them "to closely observe student responses to teaching moves and plan specific next steps for individualized instruction." They found "the dialogue between teachers about the lesson is most valuable" and "a powerful collaborative learning opportunity" (Q3: 5). It is worth highlighting a participant's comment: "the courses equipped me with terminology and rationale as to why certain approaches were beneficial and in what context" though these were what she had been doing already in the classroom to varying degrees (Q3: 10).

Overall, participants summarized that effective online literacy teaching and learning should include clear expectations, discussion board engagement, small groups, and well-designed class structure (organization, syllabus, routines). The most effective online literacy courses all had clearly established "expectations and protocols for discussion and collaboration" and the best online classes they shared included "effective discussions, both synchronous and asynchronous" (Q4: 5). Small group work helped to "keep students engaged and motivated." (Q4: 7). The key lies in the design of online courses is "simplicity" (Q4: 10). It is extremely helpful to have a "predictable routine of assignments...a handful of well-curated

readings/videos/supplementary material." They appreciated that "syllabus was shared before the course went live" (Q4: 10).

Students want personal engagement. This engagement comes in the form of instructor-to-students, but also student-to-student interaction is appreciated. Respondents had a few suggestions on how to structure these interactions, to reap maximum benefits. Some of these suggestions are simple, such as prompt replies to email and other requests for help, and some are more complex, such as developing online environments that include a variety of formats including whole group and break-out discussions, synchronous, and asynchronous opportunities.

Field Experiences and Online Tools

When asked what made an online literacy class more effective than other online literacy classes, 31% of the participants reported field based/practicum assignments, 24% reported faculty feedback, 19% chose course readings/videos, and 18% selected interactions with peers with 8% believing written reflection was helpful.

Table 6
Components of Effective Online Literacy Class (N=127)

Effective Literacy Class	Frequency, n (%)
Field based/practicum assignments	39 (31%)
Faculty feedback	30 (23%)
Choice of readings/videos	25 (20%)
Interactions with peers	23 (18%)
Written reflection	10 (8%)

Participants reported that the aspects of applied or field assignments that have helped or could help them to be a better literacy teacher included remote option, working with students to actually apply the content, observations of live or recorded lessons, connecting readings to observations, individualized instruction, practice with strategies and assessments, and use of terminology and rationales for various approaches. A remote option in field assignment would help them "know how to teach virtually" (Q3: 2), which is significant during the COVID-19 pandemic. Working with students in practicum or courses with field components allowed them to apply what they learned, practice with "new literacy strategies and assessments," "make notes of (students') challenges," and use "actual data to inform (their) instruction" (Q3: 3 & 4).

When reporting technology tools that they have used in online classes that have furthered learning, participants listed technology tools in four major categories: website, learning management system, resource, and other. Types of software that was found useful were tools that (a) allowed for collaboration; (b) video conferencing that allow live and recorded communication; and (c) tools that organize course material and assignments.

Discussion

Considering increasing enrollment in online courses and online-only degree programs, the continued assessment and evaluation of student experiences has an important role in the development of advanced literacy practitioners (teachers, coaches, and leaders). In the years since Miller et al. (2017) reported suggestions for improving online learning, the number of online course opportunities has exploded. As we write this manuscript, during the global pandemic of 2020, these opportunities approach 100% as entire universities shift toward online-only instruction.

Looking more closely at the findings three areas of discussion are uncovered: (a) the impact of online learning on self-efficacy and perceptions of confidence in completing online coursework; (b) course design that considers the key factors that can build a CoI; and (c) students' appreciation of opportunities to engage in field experiences even when classes are online. As Garrison (2017) exemplified, the creation of a CoI impacts the effectiveness of online learning.

Engaging in online learning impacts self-efficacy and perceptions

Students' engagement in online learning impacted their perceptions of this modality and built self-efficacy for using online applications for teaching and learning. Throughout the study, students highlighted different applications that were used for learning that they may try to use for their own teaching. Participants shared the fact that programs for infographics, reading data bases, and tools for interactive learning that were used in their online graduate education courses could be used in their face-to-face courses as well. Research on self-efficacy (Zimmerman, 2010) indicates that an individual's beliefs about technology could impact their ability to engage with technology across teaching and learning. The findings in this study support the fact that students engaged in online learning for their literacy graduate work could have a deeper sense of self-efficacy for applying digital literacy within their K–12 classrooms.

One of the most interesting findings from this study was that students' perceptions of online learning changed after engaging in an online graduate course. As reported in the findings, students' self-efficacy about using technology in different domains was not impacted by engaging in online learning; however, after taking an online course, students were almost twice as likely to love online learning than prior to taking an online course. This finding is key because it demonstrates how perception of online learning is impacted by participation in online learning. Students enter online learning with a vast difference in experience with online coursework. Faculty need to be cognizant of these differences as they support especially novice online users to assure that they not just know how to use the digital tools but that they engage in the CoI.

Many teachers received their teacher education training in face-to-face programs (Author, 2016), so the frame of reference for learning is via a traditional model of instruction. This potential apprehension was displayed in students' pre-perceptions in their expectations for online learning. Students' perceptions of favorability of online learning almost doubled from pre-program perceptions. While there may be initial concerns of the unknown aspect of online learning, participants indicated a strong confidence in the use of technology in their personal and work lives. This is good news for instructors who are concerned about student's ability to navigate among different digital resources. While there may be initial concerns on using new technology or new digital platforms, this confidence demonstrates self-efficacy in a world of digital/online learning. When students have success in navigating online learning, this increases their perceived ability to complete coursework.

Effective online learning develops a Community of Inquiry

Garrison and colleagues (2000) stated that effective online teaching engages social presence, cognitive presence, and teaching presence, while teaching presence is essential to balance cognitive and social presence. Participants in the study reported supportive interaction with peers was key to the creation of a CoI and thus fosters a positive online learning environment. Some of the participants believed that their interaction with other students was instrumental in developing and growing their literacy knowledge as they exchanged information and experience. This informed their knowledge and enriched their teaching experiences. Peer

support and instructor's presence increased student's satisfaction and limited their feeling of isolation.

Students in our study placed a high value on the professors' feedback, guidance, and interaction with students throughout the course, as also found in Anderson, Rourke, Garrison, & Archer's (2001) study on teaching presence. However, the social and cognitive presence of the courses could not have occurred without the effective implementation of teaching presence that is influenced by the instructional design of the course. Students found accelerated courses, courses without clear schedules for learning, and lacking university support as problematic. Throughout the survey's students highlighted the need for clearly established expectations (teaching presence), interactive activities to support learning and collaboration (cognitive presence) and include personal engagement (social presence). Course assignments that did not build a CoI included assignments such as reflections and were viewed as less effective by the respondents. As found in Swaggerty and Broemmel (2017), the effectiveness of online courses relied on communication and collaboration, shared feelings of membership in the online learning community, and the authenticity of assignments and course activities. Fedynich et al. (2015) indicated the instructor's role as being vitally important to students' satisfaction.

Results indicated a conflicting result in the area of students' perceptions of mode of instruction (face-to-face, all online, hybrid) and how students' complete coursework (synchronous, asynchronous). In analysis, 72% of participants indicated they preferred some type of shared learning experience that would occur in either hybrid or face-to-face interactions. These learning experiences would be synchronous, times when all students are required to attend a specified class time. However, there was a strong preference for asynchronous learning (75%), meaning this work was done at their own pace and time. This conflict in mode of instruction versus independent could create conflict during the class. While students may perceive some type of interaction valuable, the flexibility of asynchronous learning has a greater value in their daily lives for managing work and home life needs. Cox and Cox (2008) contended that asynchronous, threaded discussions can be effective in creating a collaborative learning environment as well as interpersonal and group dynamics. Yuan and Kim (2014), however, suggested that asynchronous and synchronous technologies should both be used to create a shared space in which students and instructor interact. The question for faculty becomes how to balance the amount of face-to-face requirement (even if done virtually) with independent work.

Field experiences in online classes

Throughout the surveys, participants highlighted the impact of applied assignments or field experiences to support learning. Since the participants in this study were practicing teachers or eligible for certification, they all have had some experience in the classroom. Yet, applied assignments (videos of classrooms) or field experiences (practices within classrooms) were highly valued by the participants. In fact, field experiences were highlighted as the most effective tool for learning in online literacy courses. Simpson (2006) explained that in field experiences teacher candidates test theory and practice, which allows them to attain unique classroom management skills, differentiate instruction, and reflect on their teaching practices (Jackson & Jones, 2019; Kennedy & Archambault, 2012). Moreover, Graziano and Feher (2016) found that in virtual field experiences, cooperating teachers could give teacher candidates critical feedback and have more meaningful conversations, including giving them advice on technology, content and delivery of lessons, and timely feedback

Prior to COVID-19 teacher candidates took part in virtual field experiences because of convenience and flexibility where they had more time to accomplish things, fulfill family

obligations, balance work and school schedules, and eased financial stress (Waters & Russell, 2016). Picciano and Seaman (2009) reported that over 1,030,000 students in elementary school, middle school, and high school are attending online schools; therefore, there is a demand for preparing teacher candidates to teach in online environments. Teachers' commitment to unpaid internships have added financial hardships on students (Waters & Russell, 2016). Having teacher candidates complete their field experiences online allows them to have an income while completing their field experience. Teacher candidates' success in being effective in online classes are connected to their pedagogical beliefs, technology platforms used, and their time management skills (Hemschik, 2009). Teacher candidates' internships could be creatively implemented all depending upon the logistics and design of their field experience. Effective instructors will understand their student experience and are able to positively shape their experiences in their online field placements.

Recommendations

These findings support the idea that course design has an impact on student's self-efficacy (confidence in technology), building a CoI, and faculty impact. While the finding of the importance of course design is not surprising nor a new idea, it does create implications for literacy educators as we forge into the new normal of online instruction.

Student Self-efficacy and the Community of Inquiry

First, student self-efficacy is built through a well-designed class that embeds chances to build self-efficacy through peer modeling and interaction (The Education Hub, 2015). When students do not feel supported, student's self-efficacy does not grow. Peer interactions play an important role in "academic identity and self-efficacy beliefs" (Taylor, 2017, p. V), but often require a greater effort to build in online instruction (Nagel et al., 2009). Course design must thoughtfully consider how to make asynchronous classes embedded with opportunities for social interaction. As students noted in this study, initial perceptions of online learning left students unsure of what to expect, but their confidence quickly grew to loving online work after taking courses. This confidence equates into feelings of self-efficacy, as students are successful engaging in online learning.

Also, not surprising, but still warranting attention, is the need for faculty to consider the design of the coursework to embed opportunities for social interactions to enhance learning through the CoI (Garrison, 2009). Learning does not happen in a vacuum, but if students do not have chances to interact, learning becomes an isolated activity (Cattone, 2001). This isolation can be especially problematic in online education, as students are isolated by physical distance and denied a readily accessible peer group (McInnerney & Roberts, 2004). This means the faculty building these courses have the responsibility to develop meaningful interactions.

A primary mode for interactions in online courses comes via the use of discussion boards. These discussion boards are used to mimic the student-to-student interactions found in face-to-face classes. However, students, while indicating a want of these types of collaborative interactions found in synchronous classes, at times, find discussion boards less useful. As faculty design courses there is a need for clear purpose provided for discussion boards. Often discussion boards have a minimum length of responses, with the length of response used as an indicator of students thoughtfully responding to a prompt. However, without a clear statement from the instructor about the importance of the discussion, this social interaction becomes busywork or a task to complete.

Another implication for faculty is to review discussion board questions for purpose and building of classroom community. If the intent is to foster relationships, faculty may want to consider other means to create these relationships than just using discussion boards. This is where the use of technology tools can be used to create an alternative to discussion boards.

Knowing your Learners

A somewhat surprising implication relates to a strong confidence in using technology in both personal and professional use and the implication for course design. While there will always be some students who are not as confident in using technology, this seemed to be the minority of respondents. One reason for this could be the age of the participants. With 64% of study participants aged 40 and younger, there may be a perception that technology is used consistently in day-to-day living and the use of technology in online learning would not cause undue stress. This means teacher educators can implement technology that may have been perceived as too technical or complicated to be used in an online format. If these results hold true, comfort in using technology is not a hindrance to course design. While one participant referred to the need for a simple design, simple does not have to equate with students functioning independently, without social interactions.

Teacher Educator Impact and the Use of Technology

This implication in course design begins with the instructor's pedagogical goal that includes technology that supports learning (Ertmer & Ottenbreit-Leftwich, 2013). Teachers are taught not to use technology just for the sake of using technology (Wilson, 2016). However, in online learning, technology is a critical aspect of instruction. Yet, knowledge of technology tools and knowing what works with content can take years to perfect. The transition from face-to-face to online, for many, was not gradual but instantaneous. This meant that the time for piloting tools disappeared, as teacher educators jumped into creating online courses. Effective course design is dependent on faculty who are well-trained in online teaching methods (Zweig & Stafford, 2016). Literacy faculty are well-versed in face-to-face courses as the trainers of teachers in best practice methods of instruction. However, instructional methods in a face-to-face format do not always translate into online instruction. Online instruction has been a reality for years, but "we have few assurances that [educators] are able to use technology for teaching and learning" (National Education Association, 2008, p. 1)

For teachers to be effective in online instruction it is necessary to provide adequate professional development to both novice and veteran faculty (Crawford-Ferre & Wiest, 2012). Faculty need training to create courses that include carefully designed instruction, purposeful implementation of content, and methods to evaluate instruction (beyond the end-of-course evaluations). Similarly, Crawford-Ferre and Wiest (2012) suggested that online faculty have professional development and sufficient professional training related to the online design and instructions.

This lack of time in developing online courses creates an implication regarding sharing of instructional content and methods. In a perfect world, faculty would have the time to: (a) research resources and materials that offer teaching tips for using technology tools in the classroom (virtual and face-to-face; (b) try the technology tools in a small group setting; and (c) transition to larger online classes. However, with the pandemic there has been a loss of time in discerning the best tools to use in specific teaching literacy content to graduate students. This lack of time to create strong content and use engaging technology creates an implication for the sharing of ideas between teacher educators. While the internet is littered with resources, the

pandemic has amplified the need to share materials and technology resources that work. K–12 teachers have organized efforts and are joining together to share teaching resources (Will, 2020).

However, higher education literacy faculty do not seem to be as organized as K–12 teachers in efforts of sharing materials. It would be advantageous to all literacy faculty to have access to what works best in teaching the essential aspects of literacy. When faculty have access to materials that can be modified to meet the needs of their learners, it eases some of this individual intense time in researching tools and content. The focus can be spent on interacting with students, with not as much time spent on just figuring out how to implement the content. A shared database for field-based or applied assignments to improve online teaching.

A final implication surrounds the vocabulary of online education formats. There seems to be no one single or clear definition of the terms "hybrid," "synchronous," or "asynchronous" (College of Dupage, 2020). Faculty need to be specific in describing the meeting formats with students to avoid misunderstanding of class formats. For example, many learners would identify hybrid *instruction* to be a mix of online and face-to-face teaching formats. However, face-to-face no longer just means sitting in a classroom, but the meeting of a group of students with a faculty. The face-to-face in a classroom has been replaced with the face-to-face in an online setting. The same implication surrounds the words "synchronous" and "asynchronous." Participants in this survey indicated a preference for asynchronous learning. But "asynchronous" could mean independent work or not meeting as a class at the same time. Teacher educators need to make clear expectations for how and when the class will meet, beyond just using the common vocabulary of online instruction.

Conclusion

COVID-19 amplified the need to consider aspects of online teaching and the impact on literacy graduate students' learning. This study was created to discern not faculty wants or needs, but to gather the perceptions and voice from students about their online learning experience. As highlighted in the result, students do embrace online formats while still seeking the feel of instruction typical in face-to-face environments. It is time then for teacher educators to also embrace online instruction while acknowledging the landscape of higher education instruction may be permanently altered and may never return to pre-COVID-19 type of teaching methods. Teacher educators should use this time as an opportunity to reflect and change instructional methods so students can continue to have opportunities for new learning. Old tried-and-true methods that were used in face-to-face classes do not have to be completely dismissed but may need a major overhaul in delivery. One of the tenets of teacher education is the ability to model methods of best practice to our learners. The modeling may look different than in the past, but it now includes best practices in online instruction. What our graduate students learn while engaged in their own online learning experiences is an opportunity to transfer these best practices to their own instruction of K–12 students.

Declarations

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All authors adhered to approval from the ethics board at their respective institutions located in the USA for this study.

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