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Dr. Thomas Knestrict, Xavier University
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A MESSAGE FROM THE EDITOR

Dear OJTE readers,

The fall issue of OJTE is diving into several very relevant areas of research. We begin this issue with an investigation of the importance being aware of the impact of Adverse Childhood Experiences (ACES) for children with disabilities. Welton, Shernavez and Kline examine ACEs in children with disabilities, symptoms that alert teachers to risk factors, and some trauma-informed intervention techniques. The next article by Googins and Winn, discusses three successful strategies for Online Reading Groups to Raise Sociopolitical Awareness. Our third article delves into The Impact of Teaching Modality on Preservice Teacher Perceptions of Video Discussions. Kormos, a Ph.D. of Communications Media and Instructional Technology, offers an informative take on these issues as they relate to Asynchronous video discussion forums. Finally, we have an article, by Rook & Reister, on Developing a reliable and valid ePortfolio scoring rubric for gauging preservice teacher growth in key educator domains.

I hope you enjoy reading this issue of the OJTE. The diversity and quality of the articles published in the OJTE are rigorous, informative, and accessible to both researchers and practitioners. I encourage you and your colleagues to continue doing this fine work and of course, submitting your manuscripts to us each year.

Sincerely,
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Alerting Educators to Adverse Childhood Experiences in Students with Disabilities

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Abstract:

The well-being of children is of paramount concern to families and society. As improvements in public health and education have advanced, the impact of traumatic or adverse childhood experiences is now recognized as a serious issue. Because of the potential for short-term and long-term effects on learning, behavior, and physical health, efforts to address trauma and adversity now include educational approaches that are trauma-informed and team-based. Specifically, The National Child Traumatic Stress Network (n.d.) identifies partnerships among students, families, and the community as among the essential elements of a trauma-informed school district.

While significant improvements have been made for students in the regular education setting, children with disabilities may additionally experience adversity and trauma and therefore need services. Because children with disabilities may present unique challenges in the areas of recognition, assessment, and intervention, they may be a population that remains underserved. There remains a significant demand to address their needs using the expertise of educators as well as community support personnel.

Addressing ACEs for children including students with disabilities

Studies have revealed that a relationship exists between exposure to Adverse Childhood Experiences (ACEs) and later physical and mental health (Felitti et al., 1998; Center for Disease Control and Prevention Violence Prevention (CDC), 2019). The results of this initial study were then supported by a meta-analysis of 96 later articles (Petruccelli, Davis, and Bermana, 2019). This meta-analysis revealed a consistent relationship between exposure to ACEs and various medical and mental health problems and recommended screening by pediatricians and the identification of strategies to address this need.

In addition, the CDC (2019) reported that one in six adults surveyed reported having experienced four or more types of ACEs. The data further reflects that women and minorities are most at risk for exposure to multiple ACEs during childhood. The ACEs data is divided into abuse and household challenges and then subdivided into additional categories. The specific subcategories are physical, emotional, and sexual abuse, physical and emotional neglect, and household challenges defined as household members abusing substances, members having mental health problems, intimate partner violence, parental separation or divorce, and/or member incarceration.

While these investigations by the CDC reflect increased risk among certain populations, they do not reflect the prevalence of adverse childhood experiences as related to disability. Compton, Duncan, and Simpson-Adkins (2021) explored the research investigating exposure to

ACEs and individuals with intellectual disabilities. They concluded that there is limited research in this area and further evidence is required. Due to limited research, the long-term impact on the physical and mental health of individuals is not clear.

While large studies investigating ACEs and the relationship with later functioning as adults are limited for persons with disabilities, some studies have explored the prevalence of specific experiences and specific disabilities. Individuals with disabilities are at higher risk for physical, emotional, and sexual abuse with the specific types of abuse related to the type of disability. Students with disorders that can be considered disruptive and/or conduct-related are at higher risk for physical abuse. Students who have disabilities requiring intensive adaptive and physical care needs are at higher risk for neglect or sexual abuse. This increased risk may result from several factors including limited verbal capabilities as they are less able to report their experiences (CDC, 2019).

Reid (2016) reported that girls with intellectual disabilities are at higher risk of sex trafficking and exploitation. Reid suggested that the risk may be related to the impact of the disability. Specifically, the victims may not understand that they are being exploited, are unable to identify themselves as a victim, and are easily manipulated by the traffickers. The victims may also have a complex interpersonal relationship with those who are exploiting them. In addition to the reasons for risk identified by Reid (2016), individuals with intellectual disabilities have greater access to the community and greater independence when compared to individuals with very intensive needs. Greater access and independence may carry increased risk.

Some issues are relatively unique to programs for students with disabilities that may be considered adverse and stress-inducing. Students with disabilities may demonstrate behaviors that result in intensive behavioral control measures in the school setting. Some schools allow forms of restraint or seclusion when a student poses a threat of harm to self or others, and there is no other alternative intervention available (Ohio Department of Education, 2021). Either experiencing or

observing these types of intervention strategies could result in feelings of fear or anxiety, not unlike an adverse childhood experience.

Students with disabilities may also experience the types of ACEs that children without disabilities experience such as parental divorce, family members with addictions, or family members who are victims of violence or commit suicide. They may also experience bullying and peer rejection in school and community settings. While these ACEs are the same as those experienced by children without disabilities, children with disabilities may have more difficulty with processing the events and communicating their feelings to trusted adults. Intervention may not be forthcoming, as the child with disabilities may not recognize the need to inform educators or counselors about the stressful events. Moreover, it may be difficult to find therapists who have expertise in counseling and effective therapeutic techniques for children with cognitive or language difficulties.

In summary, research has revealed that exposure to adverse experiences in childhood is related to poor physical and mental health outcomes in later life. While exposure to ACEs is not uncommon, certain populations such as women, minorities, and individuals with disabilities are at higher risk for exposure to adverse experiences either directly or indirectly through observation. Therefore, they may be more likely to experience medical and mental health issues later in life. Additionally, persons with disabilities may be less likely to report the abuse and have limited access to therapy and interventions that could increase resilience and mitigate the impact of the adverse experiences.

It is critical for pre-service and in-service educators to be aware of the possibility of ACEs and their impact on the academic, physical, and mental health of students with disabilities in the school setting. In addition to recognizing the impact of ACEs on students with disabilities, it is also important to know how to access the collaborative structures currently in place to identify and intervene for students with disabilities who are at risk for ACEs. Collaboration between

community services and the school may prove helpful in locating appropriate service providers. Using the various team processes such as evaluations and the Individualized Education Program (IEP) which consider ACEs for the identification and development of appropriate objectives and strategies could enhance the effectiveness of the whole process. While it may be necessary to adapt lessons or activities, including students with disabilities in trauma-informed education activities also help improve behavior and increase resilience.

How ACEs May be Demonstrated in Students with Disabilities

The impact of ACE on behavior and academic performance in the school setting can be complex due to the presence of a co-existing disability. Understanding the impact may be somewhat simplified if the nature of the adverse childhood experiences is known but is enhanced when all stakeholders on the special education team have good communication with the families and among team members.

Charlton, Kliethermes, Tallant, Taverne, and Tishelman (2020), support the need for increased understanding and recognition that children with developmental disabilities are at risk for exposure to trauma and need adapted strategies for therapy. Cook and Hole (2021) found that negative or traumatic events are more likely to result in a traumatic response in individuals with disabilities as they have limited communication and cognition. Specifically, they noted that children with intellectual disabilities may demonstrate their reactions to trauma and adversity as inappropriate behavior and/or skill regression. Social/emotional/behavioral issues may be seen in a variety of different forms either through externalizing or internalizing behaviors. In some cases, children may act out aggressively or may withdraw and avoid situations or persons that remind them of the abuse. Several mental and/or physical characteristics can result from exposure to trauma or severe stressors. These include disorders of attachment, social engagement, acute stress disorder, and post-traumatic stress disorder. It must be remembered that not all reactions are due to direct experience of trauma such as abuse or neglect. At times, children may have experienced something

indirectly such as witnessing an event, or the stressor may be due to a medical event such as surgery (American Psychiatric Association, 2013).

If an educator suspects abuse or neglect, local child protective services must be informed for further investigation. Since children and youth in special education programs often demonstrate limited language function and cognitive difficulties, they may have difficulty understanding and reporting their experiences (Charlton, Kliethermes, Tallant, Taverne, and Tishelman, 2004). Specifically, they may not be aware that what they are experiencing is atypical or illegal. They may respond with indicators of fear or anxiety such as crying, screaming, eating poorly, stranger or separation anxiety, or avoidance of situations that may or may not be related to the trauma. Sleep disturbances and a preoccupation with words or symbols may also be related to the trauma. These characteristics are similar to those of individuals without disabilities as identified in the *DSM V* (American Psychiatric Association, 2013); however, the person with limited language or cognitive skills may lack the insight to share the source of their experiences. Therefore, it is the responsibility of the special education teams to be vigilant and aware of behavioral changes and differences that appear to be outside of what might be expected of children of a similar age with disabilities. In addition, changes from baseline or typical behavior should be investigated by the team. The process of identification and interventions is complex and must be undertaken promptly with caution and care and in collaboration with other professionals in the school setting.

Special education teams have expertise across various disciplines, and the methods used for educational assessment and data collection are also applicable to students with disabilities who have experienced ACEs. Understanding the cognitive/language characteristics of students with disabilities as well as skills with behavioral observation and data collection can be very helpful when evaluating and determining appropriate intervention strategies. The collaborative nature and emphasis on a team approach are pivotal in the assessment of needs and service provision.

Several strategies are applicable to students who are in the regular education program but may also be adapted for children with disabilities. For example, Trauma-Informed Education and School-Wide Positive Behavioral Intervention Support are among two strategies that are widely used in many Ohio districts for both regular and special education students (Ohio Department of Education, 2021). Trauma-Informed Schools emphasize awareness of the impact of trauma, the infusion of practices designed to minimize the impact of trauma and facilitate recovery and/or adjustment and collaboration with all those involved with the child (National Child Traumatic Stress Network, 2017). School-Wide Positive Behavioral Intervention Support emphasizes teaching appropriate prosocial behavior through positive feedback rather than relying upon a punishment model. It also emphasizes data collection and evidence-based decision-making (Center for PBIS, 2022).

Whenever students demonstrate behavioral difficulties, the special education team must consider all possibilities, rather than beginning the evaluation process with a preconceived notion regarding the etiology or belief about the individual with the disability. The team members should avoid attributing all behavior as simply a function of the child's disability. This type of bias has been identified in the literature as "overshadowing bias" (Manohar et al., 2016). In overshadowing, all challenging behaviors are considered to be a function of the disability characteristics as opposed to indicative of a co-existing problem. Manohar et al. also state that "diagnostic masking" may occur. In this case, the characteristics of the disability mask the existence of a co-existing disorder or issue. The problems with language, comprehension, or already existing behavioral problems such as self-injury or aggression may inhibit the special education team from noticing behavioral or academic changes that signal response to adverse events. In both overshadowing and masking, there is an evaluation error, and the conclusions are not valid. Similar to overshadowing or masking is a tendency to minimize or underestimate the reactions of persons with disabilities. In other words, the team may erroneously believe that individuals with disabilities do not have the capabilities to

experience anxiety or depression due to adverse events. For example, there may be of the belief that an individual who is exposed to restraint or seclusion will not find the experience as distressing and aversive as an individual without disabilities. This is not only incorrect but also potentially unethical as this belief undermines the dignity and worth of the individual.

There are several behavioral and adaptive behavior checklists that may be helpful for evaluation. It is important for the team members to collaborate with the family or caregivers to gather background information, review records, and consult. The team will want to know whether the onset was abrupt or more gradual and identify other issues that may have been occurring concurrently. It will also be important to understand whether the behavior is regressive.

The team should also be familiar with the concepts of Applied Behavioral Analysis (Alberto and Troutman, 2017). Team members involved in the evaluation must be skilled with behavioral recording techniques. For example, changes in behavior should be operationalized and the appropriate recording techniques should be utilized. Baseline data should be collected to determine how long the behavior has been occurring and if there was a point in time when the behavior changed. Completion and analysis of a Functional Behavioral Assessment (FBA) are also needed. Identification of the antecedent/behavior/consequence and then the development of the appropriate behavioral hypothesis is very important. Children who are exposed to an adverse event may begin to demonstrate behavior indicative of avoidance. For example, the child may become fearful and avoid certain individuals or demonstrate noncompliance when boarding the bus to return home. A child that is neglected may demonstrate behavior that is attention-seeking or, if the neglect involves meeting basic needs, the child may demonstrate stealing food or hoarding or any other tangible goal. In any of these cases, the child may be in some way disciplined for demonstration of inappropriate behavior, however, it may be contraindicated to present another aversive consequence for a behavior that is the result of a current or previous aversive childhood experience. The use of

collaborative team meetings is essential in the school setting when attempting to determine a valid behavioral function and intervention strategies.

In addition to the collaborative nature of special education teams, the special education team process and the professionals involved with those teams are uniquely positioned and skilled to evaluate the impact and address many adverse childhood experiences with children with disabilities. The knowledge of the characteristics, behavioral data collection, and the transdisciplinary collaborative approach is extremely valuable for careful evaluation and the development of efficacious intervention strategies. For pre-service and in-service teachers to develop the knowledge, skills, and dispositions needed for working with students with disabilities who have experienced ACEs, teacher licensure programs must embed these concepts in their curriculum and field experiences.

Addressing ACEs in Teacher Licensure Programs

While the Ohio Department of Education (2021) supports Trauma Informed Education and Positive Intervention and Behavioral Supports in teacher education curricula, more needs to be done to specifically address the unique needs of students with disabilities. A first step may be facilitating the understanding that students may be significantly impacted by exposure to ACEs. Because students are unable to communicate verbally or have limited cognitive and adaptive skills, it does not preclude them from experiencing stress and anxiety. In addition, teacher licensure curricula should include presentations by caseworkers from protective services and other mental health professionals to deepen their understanding of ACEs (Welton and Vakil, 2010).

School districts employ many strategies such as Response to Intervention that can serve as the first line of support if students demonstrate behaviors that may be the result of ACEs. Teachers should be cognizant of the importance of these structures and strategies so that they can have a holistic view of students and provide comprehensive services. It is also beneficial for pre-service

programs to provide increased opportunities for candidates to observe and participate or role play in team activities which include teacher-based teams, intervention assistance teams, and IEP meetings.

Pre-service special education courses in behavioral interventions that stress PBIS, Applied Behavioral Analysis, and long-term ethical practices are essential. While school counselor and educational leadership programs may focus on the unique needs of students with disabilities and their families, these programs should also emphasize that students with disabilities are at high risk for a variety of adverse experiences that may result in long-term negative consequences. School counselors and administrators are pivotal in creating a school climate that supports proactive, positive strategies for all children. All school personnel must work together to intervene for students who may have experienced or are experiencing childhood adversity. Teaching an inclusive and collaborative mindset for educators begins in educator preparation programs.

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Teaching Strategies for Online Reading Groups to Raise Sociopolitical Awareness

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Abstract:

This study focuses on online-reading groups in an online-graduate course in teacher education. The research question in this mini-case study was: How can we implement reading groups in an online environment that can engage students in critical thinking, knowledge construction, and foster a sense of community while building sociopolitical consciousness? We discuss three successful strategies that surfaced in the research. First, a regular, predictable structure is important, especially for an online class. Second, community-building and ongoing, personal feedback is essential. Third, the teacher needs to be engaged with student learning by providing supportive and critical feedback towards sociopolitical consciousness. We present these findings and include student responses to our praxis that validate our strategies.

Keywords: Reading groups, online, feedback, participation, community, sociopolitical consciousness

Introduction

In Summer 2020, I (Author 1) was asked to teach History and Philosophy of Education (History and Philosophy), a course that is required of all graduate students in the School of Education. Based on the syllabi provided, the course had previously been taught from a perennialist perspective; the history of education was presented based on places, people, and dates, and philosophical orientations to teaching were embedded in the study of this history. Students read a text, memorized information, took exams, and wrote a traditional philosophy of education. The course was disconnected from teachers' lives and was steeped in a banking system of education; the instructor dispensed knowledge, and the students received it (Freire, 1998).

As I (Author 1) began to conceive of how to structure this course, we were in a time of uncertainty with the COVID-19 pandemic. The course had already been taught online, but I knew that the pre-service and in-service teachers enrolled in the course would be contending with shifting circumstances in their own lives and classrooms. Additionally, the summer of 2020 was one of social and civil unrest, one that I believed would forever alter our institutions, especially regarding race. I felt called to engage the class in dialogue about equity and to put sociopolitical issues, as they have manifested historically and, in the present, at the center of the course.

So, I (Author 1) set out to design the History and Philosophy of Education to be engaging and relevant, to prioritize critical issues, and to utilize collaborative reading groups that were designed to stimulate critical and engaging conversations around sociopolitical issues as a way to achieve social justice and culturally relevant education (CRE) outcomes (Aronson & Laughter, 2015). After that first summer and fall, Author 1 connected with Author 2, and we endeavored to study the outcomes of the implemented reading groups in this course over several semesters. We specifically asked: *How can we implement reading groups in an online environment that can engage students in critical thinking, knowledge construction, and foster a sense of community while*

building sociopolitical consciousness? We learned that course structure, assignments, included texts, and instructor role(s) are vital in supporting the critical and pedagogical goals of reading groups. The following sections detail the study that we conducted of this course, the three successful strategies, and how students responded to the course construction.

While the technical suggestions we offer may successfully be applied to other online contexts, our findings are specifically oriented towards critical ends. We were intentionally fostering sociopolitical-consciousness-raising with "social issues books" (Lewison et al., 2015, p. xxix). Thus, our findings and recommendations emphasize course design first but also explicitly name our pedagogical commitment as educators seeking to encourage sociopolitical consciousness among teachers. In a time of teaching while "the world is on fire" (Delpit, 2019), our profession demands effective course design as well as engaged teachers to prompt critical outcomes.

Critical and Collaborative Online Literacy

Pedagogical strategies around groups and literacy have existed for decades (Beach & Yussen, 2011; Bowers-Campbell, 2011; Burns, 1998; Cantrell, 2002; Daniels, 2002; McGinley et al., 2000; Scharber, 2009; Twomey, 2007). As we engage and prepare practicing teachers at the graduate level, we center the insistence that reading together matters. Collaborative literacy structures are rich sites of meaning making (Harvey & Daniels, 2009). In the context of asking students to engage in critical conversations, collaborative strategies have shown to be even more crucial.

When designing the book clubs studied, we leaned on cornerstone texts to determine "key ingredients" of literature circles, including: the importance of students choosing their own materials, small groups forming around shared text choices, and having students "meet on a regular, predictable schedule to discuss their readings" (Daniels, 2002, p. 18). Reading groups focused on *critical* engagement also require specific stewardship. Since "paying attention to sociopolitical systems and power relations does not happen much in traditional classrooms, students need support

as they venture into this new territory" (Lewison et al., 2015, p. 131). Teachers "need to become actively involved in the same practices as" and "learn along with" their students (p. 133). This is pedagogical modeling (Blauman, 2011), acknowledging that there is no teaching without learning (Freire, 1998). We theorize that, when addressing sociopolitical issues, we need to avoid becoming "stuck in our comfort zones" (Lewison et al., 2015, p. 129). Engagements with groups can help us move beyond what is comfortable (Harvey & Daniels, 2009).

The three successful strategies that surfaced in our work with reading groups in an online environment: (1) A regular, predictable structure is important, especially for an online class; (2) Community-building and ongoing personal feedback is essential; and (3) Teacher engagement is key. We present these takeaways in the context of a mini-case study and share the results of our research, including student responses, to our praxis that validate our strategies.

Methods: Mini-Case Study of a Course

The Course

History and Philosophy is a graduate-level, asynchronous, online class offered in the fall, spring, and summer for graduate students, both pre-service and practicing teachers. The figure below describes both the structural elements and the pedagogical innovations that are discussed in this paper:

Figure 1

The Course Overview

Course Elements Studied	**Format**	**Overview of Course Element**	**Pedagogical Innovation Discussed**
Foundational Modules	Weekly, asynchronous, online, whole class	LMS for course content, including assignments, weekly discussion forums of content, weekly reflections, and consistent format and structure	Weekly videos preface the content for the week and the sociopolitical context; consistent format and expectations weekly
Book Groups	Groups meet 4-5x per semester, synchronous, online	Members read the same selections from the reading bank; reading bank included the introduction + 1-2 salient chapters of texts	Instructor led small group meeting at the beginning to establish norms and assignment expectations, facilitated light interpersonal "maintenance" talk (Harvey & Daniels, 2009, p. 50); groups self-schedule meetings; groups self-select the readings; groups received voice-recorded, personal feedback for all meetings
One-Page Reflections	Written individual assignment	Weekly self-directed/self-selected one-page reflections	One-page reflections received voice-recorded, personal feedback for all reflections

Research Participants and Coding Methods

We examined written one-page reflections, book group meeting recordings, and course evaluations (Creswell, 2013). Of 83 pre-service and practicing teachers who were enrolled in the course over the fall, spring, and summer of 2020-2021, 67 consented to participate, which included seven out of 17 complete reading groups. Of the participants, 11 were male and 56 were female, and their racial make-up was generally reflective of the current teaching force in the United States—82% White and 18% Hispanic, Black, or other (U.S. Department of Education, 2016, p. 6). The participants represented several geographical regions of the United States and had a variety of educational experience. We engaged in an interpretive inquiry of how students understood their

experiences in their reading groups, which were designed to foster culturally responsive and critical conversations.

We collected 67 individual one–page reflections about participants' experiences in their groups and 31 group meeting recording excerpts, ranging from approximately 10 to 30 minutes each. We engaged in holistic coding for emergent codes (Saldaña, 2016) followed by focused coding and axial sub-coding to solidify themes and delineate the dimension of each theme (Saldaña, 2016, p. 235).

Figure 2

Codebook Sample

Round 1 Codes with Code Counts	**Round 2 Codes**	**Key Findings supported by Data**
• About Group Dynamics (n=71)	• Enjoyed the experience of group conversation and learning • Expressed an experience of being in relationships with other group members specifically in group life • Learned content better together in community • Self and Others' Work Habits	A Regular, Predictable Structure Community Building and Ongoing Personal Feedback
• Sociopolitical Consciousness (n=52)	• Issues of Representation • Naming Inequality in General Terms • Identifying School-Based Responsibilities of Teachers for Inequality • Naming Oppressive Groups/Structures • Naming Race including Whiteness	Teacher Presence and Participation

This process resulted in two categorical themes, one focused on the groups themselves and the other focused on the critical outcomes of the reading groups. Each of the two themes was sub-coded thematically for the three successful strategies identified in this paper. Our learning from the findings is organized according to pedagogical intervention and how students responded. In addition to evaluating in-course materials, anonymized course evaluation data helped us solidify which pedagogical aspects of the course were most salient. Questions such as "What aspects of the course

did you find most helpful in enabling you to meet the course objectives?" were particularly helpful. Course evaluations in three semesters, with an overall response rate of 84% (70/83), showed that students made comments specifically about course structure. Quotes shared about course structure are from course evaluations as well as one-pagers. All quotes used are permitted under IRB approval.

Findings: Successful Strategies

In this discussion, we will present three successful strategies identified in data collected from participants about aspects of class design and pedagogical engagement: regular, predictable course structure, community building and ongoing feedback, and teacher presence and participation.

Strategy 1: A Regular, Predictable Structure

Students appreciate it when their teachers are organized, communicate clearly, and stick to a plan. This is true in all learning environments. In the History and Philosophy course, creating an online course specifically cultivated to serve an online environment that follows a regular, predictable schedule benefited students. In our study, students' satisfaction with the reading group experience was as much about navigating the rest of the course without stress as it was about the actual reading groups. In reading groups that engaged students in critical conversations, creating an environment of trust was as much of an essential design element as the traditional reading group elements of choice and voice (Daniels, 2002). Particularly online, predictability is identified as a way to create environments in which educators build and maintain relationships (Newhouse, 2020 as cited in Serravallo, 2020).

Pedagogical Intervention

History and Philosophy used the Canvas Learning Management System (LMS), which uses modules for course design. The modules were an important structural element to supporting the regular, predictable nature of the course design. In the History and Philosophy course, the primary, ongoing elements—the foundational modules and the reading groups—worked in concert with and

enriched each other. The foundational modules provided the core information that supported student learning. They included weekly assignments and contributed to the essential elements of knowledge construction and engagement via this course's reading groups, but they also, more importantly, provided a consistent and predictable structure, one students could depend on.

The week-to-week foundational modules included routine assignments that included interacting with a written or multimodal text, participation in 1-2 discussion boards, and a written one-page reflection. The weekly discussion prompts were drawn from the texts, while the one-page reflection assignments did not have specific, text-based prompts. Each foundational module was consistent in requirements and due dates.

The reading groups consisted of 4-5 members per group. Students self-selected their groups during the first week of the course. Reading group meetings were opportunities to discuss predetermined texts from a course reading bank, which will be discussed later in this paper. Reading groups met 4-5 times a semester. They scheduled the meetings based on their own availability and met via Zoom or another online platform, and they were required to record a portion (10 or more minutes) of their meeting. The reading group element of the course was structured while allowing flexibility to plan the meetings around group members' schedules. Their conversations were organic, and they were encouraged to pursue issues of interest that the texts illuminated.

Student Response

Creating an online course in an LMS that follows a consistent, routine structure became an important element in supporting successful reading groups. The foundational modules permitted students to claim ownership of their time; because of the predictability of the weekly requirements, they were better able to schedule their reading group meetings without strain on their schedules. There were also no surprises with due dates or extra assignments. Students expressed that they could deeply engage in the reading group meetings because the rest of their course expectations were clear.

They said things like, “Every week the course was organized well. We always knew what to expect and where to find the information,” and “The course was set up in a way that it was [sic] very clear and consistent. I was able to plan my week easily and I knew what was expected of me.” One student said, “Having a regular, weekly pattern helped me plan my time well to complete all of the work, and when we broke into small groups, my group chose to start early and incorporate the same pattern into our meetings.”

In short, students appreciate organization, predictability, and clarity. If instructors are going to ask our students to thoughtfully engage in a course, *to trust us*, it is important that we do our part by providing a learning environment that values their time and contributions.

Strategy 2: Community Building and Ongoing Personal Feedback

A classroom is a “communal place” (hooks, 1994, p. 8), even online. Meeting up in a graduate program with strangers who live in varying geographic regions and time zones is a challenging prospect. Yet, as online course designers, we know that learning communities are not restricted by location (Lenning et al., 2013). Supported by instructor modeling, Author 1 encouraged a “social presence” online (Palloff & Pratt, 2007 as cited in Lenning et al., 2013); she modeled and encouraged students to essentially “show up”, be who they are, and express themselves. Having online participants establish a “social presence … empower[s] the participants to help build community, and establish shared goals/purposes and mutually agreed-upon guidelines” (Lenning et al., 2013, p. 66). bell hooks (1994) writes, “The professor must genuinely value everyone’s presence. There must be an ongoing recognition that everyone influences the classroom dynamic, that everyone contributes. These contributions are resources.” (p. 8). With our agreement in this belief, students are asked to show up and be fully present—to bring their whole selves—akin to any space where individual contributions are understood as valuable and dynamic for learning.

Alongside reliable structure, we found it was important for the instructor to build community by consistently engaging in a personal way with each student so that students, in turn,

could build community within their reading groups. Through community building and ongoing, personal feedback from the teacher, the reading groups could move beyond niceties between strangers to complex critical conversations about difficult issues.

Pedagogical Intervention

Community building was accomplished in a few ways. Prior to when each weekly module opened, Author 1 recorded an introductory video for that module. By recording videos close to when each weekly module opened, she was able to incorporate current events and reference recent reflections. Specifically, the instructor could mention a class member by name and illuminate a discussion point that was made or post an article that relates to a class discussion.

During the first week of the semester, Author 1 set up a meeting to serve as an introduction for the groups and an introduction to the course. She began small-talk and bridged commonalities to set the group members at ease with each other, crafted group expectations and norms by suggesting meeting lengths and preparation strategies, and addressed questions and concerns regarding consistent acknowledgement of each individual's ability to contribute and share the workload. There is often apprehension about groups. Expressed one way, a student said, "I think most people have had a negative group project experience at some point and any new group project opens the door to a similar experience." Others were less circumspect, "When I found out that I was going to be in a group where I wouldn't even meet the members face-to-face, I had a pretty overwhelming sense of dread." The initial meeting with the entire group set the tone, put the students at ease, and encouraged a conversational environment. It also allowed Author 1 to highlight the central issues of equity in the course texts and prepare them for conversations that might be uncomfortable, but good. We have learned that "forward movement and action do not 'feel good.' Discomfort is necessary for any authentic conversation" (Collado et al., 2021, p. 24). It was important to prepare the groups for the hard conversations in which they would engage.

Another method that we found to be effective in supporting reading groups was providing ongoing, personal feedback on weekly reflections and reading group meetings. One Canvas element that can be used when grading is a media recording. In response to the weekly one-page reflections, Author 1 recorded voice media messages for each response. Because the reflections were limited to about one page, it was manageable to give personalized, specific feedback for each assignment. Additionally, the one-page weekly reflections were not responses to specific prompts, so students were able to choose the subject of their reflections. The assignment reads: "One-Pagers are an opportunity to reflect about the module and connections beyond the discussion post. Connecting to one's experiences, practices, philosophical orientation, and/or beliefs is encouraged." Because of the open-ended nature, Author 1 could choose a personal element that the student may have shared and comment specifically on that point. The one-pagers were personal, and the instructor could respond in kind. Simply being able to hear voice inflection and tone created more value than the ambiguity of written comments.

Using oral feedback instead of written feedback forced the instructor to be more asset-focused. There was no temptation to correct grammar or point out errors; instead, responding to the content became the focus. This is not to say that the instructor agreed with all student responses. Pushing back on a point or a misconception was essential, as described in the next section, but using voice feedback allowed the students to hear the nuances in the instructor's cadence and tone, and it blanketed the pushback with constructive, firm points. Using phrases like, "tell me more about why you feel that way…" or "tell me more about your experiences with this…" created space for the instructor to listen, learn, and respond with more context in mind.

Student Response

Personalized, specific, frequent, reflective, critical, and honest communication and connection with the class through recorded media, meetings, and oral feedback, set the tone for students to also engage in reflective, critical, and honest communication with each other when in

their reading groups and in their weekly reflections. Connecting back to hooks' (1994) point about *value* and creating an open learning community (p. 8), students felt affirmed in their experiences and reflections when individualized attention was paid to their words and contributions. The affirmation transferred to their ability to contribute and take risks in their reading groups. Reflecting on the reading groups, one participant said, "You gave us the knowledge and then let us take our own journey with it. You helped us shape who we are by allowing us to collaborate with a vast pool of diverse individuals. And ultimately, you created a space that allowed for respect and freedom to explore."

When reflecting on the course, a student said, "Everything about this course was personal, including the feedback given by Dr. Author 1 each week. Having that personal connection, especially in an online course, really helped me to connect what I learned, see how my past has shaped me, and how I can use that information and my reflection moving forward to be a better teacher." Another student, in referencing *value* (hooks, 1994) said, "It is about valuing the whole person… I go back to the word 'value,' just general value. Never before in our graduate career do [sic] we feel like someone is actually reading what we are writing and listening to us. And there is value in the work that we are doing, and there is value in her feedback. I feel like my presence is being valued because of feedback." Of the ability to build community and relationships via personalized feedback, one student said, "I was greatly appreciative of the personalized feedback. I felt like I was able to have a personal conversation via written assignments and professor feedback."

We find that people want to be a part of something, to be seen and heard, and a part of a constructive and critical community. When reflecting on reading group requirements, a participant wrote, "Sharing ideas and thoughts in general can be unnerving, you have to put yourself out there to some degree, willing to take a chance." Through regular, personal feedback Author 1 kept "showing up," and students showed up as well. They describe each other in ways that are remarkably present, even though conversations were online: "I feel like all of my studies have

brought me far, but digging deep in myself and being inspired by other educators doing the same has made the difference… I have loved getting to dive deep with other dedicated educators." Author 1 modeled being a dedicated, attentive educator, and the students mirrored her presence in the group experience.

Strategy 3: Teacher Presence and Participation

One goal, and the central focus of this course, was to raise sociopolitical consciousness through texts and group conversations. All other elements of the course were meant to support critical and engaging conversations around sociopolitical issues as a way to achieve social justice and culturally relevant education (CRE) outcomes (Aronson & Laughter, 2015). The connection of history and philosophy to equity served as an overarching theme and centerpiece of the course, lending its foundation to all other elements. For this outcome to be achieved, we learned that the teacher must be responsive. This means that the instructor must always be prepared with a timely, direct response when necessary. Asking students to engage in difficult texts and conversations about issues such as race, class, gender, and ability, requires the instructor to be constantly engaged and prepared to engage with students who have spoken in ways that express bias or promote stereotypes, intentionally or unintentionally (Ross, 2019).

Pedagogical Intervention

The initial task was creating a reading bank of current texts that engaged in issues of race, racism, equity, socioeconomic status, and pedagogy through which deep learning could be achieved [see Appendix]. It was important to choose only texts that we had read completely (and preferably multiple times) and studied carefully, so that when students were engaged in conversations, we were able to immediately jump in with the appropriate context in mind, an essential and necessary action when asking students to have critical and difficult conversations.

After the initial introductory meeting with the instructor, reading groups scheduled their required meetings at their convenience. Groups read two selections for each meeting, using tips

recommended by the instructor (list five takeaways, three connections, and one question) to prepare for the meetings. Author 1 listened to their meeting recordings in a timely manner after they were submitted, and she gave oral/media feedback for each meeting. This became an important space for them to be fully present. If a student, while engaging in their group conversation, asserted a microaggression, made a stereotypical assertion, or was even outright prejudiced, it was incumbent on Author 1 to note it and respond.

Being constantly engaged, especially around topics of equity and diversity, is not easy. A primary way we have found to approach this is to lean on literature. Richard Milner's (2020) *Start Where You Are But Don't Stay There* and Paul Gorski's (2018) *Reaching and Teaching Students in Poverty, 2nd Edition* became texts Author 1 could refer back to in response to biased, stereotypical, or racist contributions. The readings included in the course reading bank provided frameworks for enacting equity and terminology that can be used in discussions around equity—e.g., *meritocracy*, *deficit mindset*, *opportunity gap*, and more. Offering research and reading to students can take confrontation out of the response, as we can lean on scholars in the field. Responding verbally, not in ambiguous text, also supports the notion of being supportively engaged, as a verbal response can illuminate a compassionate tone from the instructor, a tone that is unequivocal in its message but still sympathetic. Additionally, the instructor used group announcements via the LMS or whole class discussions focusing on literature or current events to address a broader issue as it is illuminated in texts while avoiding individual or small group confrontation. Because so much time was spent building community and a personal connection and engaging in conversation via written and spoken word with the students, they began to expect Author 1 to respond thoughtfully and to acknowledge the value of their learning journey.

For example, in one meeting, a student in the course expressed frustration at fellow students "having brand new shoes" but not an apple to eat for lunch. Ladson-Billings (2017) writes that these types of judgment statements on parental choices are often perpetuated when teachers "treat poor

parents as if they do not love or know how to care for their own children" (p. 95). One member of the group subtly pushed back, yet an articulation of the disservice to students done by the statement was not addressed explicitly. The students' statement reified "persistent myths about education and poor children" (Ladson-Billings, 2017, p. 98); furthermore, these myths "limit our willingness to create educational experiences that serve all children well" (p. 99). It was incumbent for the instructor to respond. In Author 1's recorded response to the group, she referenced a shared text, Gorski's (2018) *Reaching and Teaching Students in Poverty, 2nd Edition*, which urges educators to take a "structural view [that] recognize[s] the structural barriers that create poverty … rather than to assume the student or her family is the problem" (p. 32). We learned that, while not easy, it was vital and necessary for Author 1 to address the conversation in her feedback—explicitly and every time.

Being a present and active participant was essential in all of the classroom spaces. It was important to watch the discussion posts as they unfolded and to jump in when necessary. The same mentality was a part of responding to one-page reflections. Creating a course around educational equity and culturally responsive objectives requires the instructor to be prepared to engage in uncomfortable moments of reckoning with students. Avoiding or choosing to let something slide is not an option.

Student Response

Uncomfortable moments were mentioned less frequently in the data included in this study than moments of growth and valuing group work and dynamics. However, we did find evidence of what students do to manage and maintain group life and what happens when relationships are disrupted. One student wrote, "I understood this is a learning process and decided to support my classmate and went with the flow not to jeopardize the good environment of the group." We infer from this comment and our observations of the group recordings generally, that there were times when some students leaned into stereotypical and deficit-based (Ross, 2019) language, such as the

example above about shoes and apples. We see, in this reflection, the need for students to respect each other's relative place on a "learning journey," while understanding that sometimes it may not feel worth calling a partner into a conversation; sometimes, students let things go. Letting things go is often more comfortable.

Groups are explicitly uncomfortable when group members are "combative." Referring to conversations around race and racist institutions and their comfort in expressing views that seemed in opposition to group members, one student wrote about group dynamics this way:

> Something changed around week three of our group meetings. The readings really seemed to sink in for those that initially came at them combatively. And our conversations softened and really started to come from a place of genuinely attempted understanding. Watching this happen in real-time was really healing for me, especially because a lot of the family I have here … is less receptive to these kinds of lines of thinking than my group members. By the end, there was no more need to hold my tongue. There was connection and empathy.

When working in a group, calling each other in (Ross, 2019) is a strategy that offers action *and* grace (n.p.). Something happened in week three that indicated a balance between engagement and discomfort that was ultimately productive for learning.

As professors, we are the ones whose gaze students drift to when privilege is exercised in harmful ways or a student expresses bias (Ross, 2019); this is true online, as well as in- person. We prepare for these responses—one part of being present—by utilizing foundational modules to prepare students with background knowledge that educates them about appropriate use of language, historical inequity, and explicitly naming ideological frames that support ongoing bias and stereotypes in schools. We have an established routine of giving constant, personal feedback, so we have regular opportunities to call students in (Ross, 2019). We explicitly support students in group work so that they can do this work as well. We support reading groups with specific norms that include the following: "expect people to disagree and to explain their position, have a reasonable

tolerance for and expectation of uncertainty, and understand the value of listening to others, particularly those who think differently" (Johnston, 2012, p. 66).

Discussion and Conclusion

The literature in the critical arenas of sociopolitical consciousness raising (Ladson-Billings, 2006) and CRE (Aronson & Laughter, 2015) often highlight student outcomes—the ultimate goals of critical pedagogies. Yet, the pedagogical interventions behind these outcomes sometimes remain opaque. What do effective teachers do to foster, push, and develop emerging critical thinking in their students? When participating, what can teachers do and say in the moment that may change the course of experience from nice to critical? (Castagno, 2014; Castagno, 2019). Furthermore, how do we do this while valuing collaborative literacy structures and community-building and in an online environment?

Our study began with the notion that group work would be a cornerstone of the curriculum—reading groups designed to engage texts, build community, and have constructive conversations; we assert that this is effective in all settings and contexts. Predictable structure is important to student learning and supports community-building. Using the foundational modules as anchor texts (Blauman, 2011; Serravallo, 2020), Author 1 created an online environment in which teaching was "aligned to a clear focus" and the students were "all pointed in a common direction" (Serravallo, 2020). When students feel anchored by consistency, they are more prepared to learn. The participants in this study described a sense of control—"I always knew," "I was able to plan," and the course structure "helped me plan my time well," which was especially vital during the intense turmoil of these past few years. Using a trauma lens, Serravallo (2020) argues that students need "a calm, safe state to be able to engage with their work" (p. 32). Being able to plan and experience a safe online environment in which there were clear expectations, set the stage for the cognitively demanding task of sociopolitical consciousness raising. Rather than surviving an online class, the students were calm and open to learning.

Media feedback on assignments was a regular part of classroom life in which the instructor could co-construct knowledge and build rapport. “Online learning is most effective when everyone belongs” (Krause, 2020 as cited in Serravallo, 2020, p. 3). When instructors call students into conversation (Ross, 2019), we are teaching and learning (Freire, 1998). But we are careful to not just critique. When we make meetings with groups early on, we facilitate social maintenance talk, not just task talk (Harvey & Daniels, 2009). We share our own personal experiences—we are “engaged pedagogues” who are actively committed to our own learning and share examples of our own learning when we connect weekly modules to current events, our own personal reading, and embed foundational modules in our own experiences (hooks, 1994).

The most challenging part of our courses is teacher presence and participation, which calls us to be who we say we are—all the time. We interrupt comfortable narratives about the socio-political realities of families and school (Lewison et al., 2015). As our list of texts expands over time, we publicly demonstrate our commitment to this learning process as well.

While all three strategies—predictability, community building and feedback, and teacher presence and participation—worked in concert in this course to achieve critical outcomes, the first two were the foundational work for the third. They are more technical in nature, while the third requires more of us. The reading groups, the collaborative critical literacy pedagogical structures, allowed students to be in a place where this could happen. How we as teachers “showed up” with students—ongoing personal feedback, presence, and participation—was how we fostered critical thinking and sociopolitical consciousness raising. We hope that the explicit strategies that worked for us, as described here, help support teachers who are striving to do the same.

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Appendix

History and Philosophy of American Education Excerpt Reading Bank - includes all text excerpts used in semesters since Summer 2020

The reading bank was comprised of excerpts, namely the introduction and/or the first chapter of the following texts:

Being Bad: My Baby Brother and the School-to-Prison Pipeline - Crystal T. Laura (2014)

Democracy and Education - John Dewey (1916/2011)

Educated in Whiteness: Good Intentions and Diversity in Schools - Angelina E. Castagno (2014)

Experience and Education - John Dewey (1938/2015)

For White Folks Who Teach in the Hood… and the Rest of Y'all Too - Christopher Emdin (2016)

"I Shall Create! Teaching Toward Freedom" - William Ayers (2019) in Delpit, L. (ed.) *Teaching When the World is on Fire*

Is Everyone Really Equal? An Introduction to Key Concepts in Social Justice Education (2nd ed.) - Ozlem Sensoy & Robin DiAngelo (2017)

Other People's Children: Cultural Conflict in the Classroom - Lisa Delpit (2006)

Pedagogy of Freedom: Ethics, Democracy, and Civic Courage - Paulo Freire (1998)

Reaching and Teaching Students in Poverty (2nd ed.) - Paul Gorski (2018)

Start Where You Are But Don't Stay There: Understanding Diversity, Opportunity Gaps, and Teaching in Today's Classrooms - H. Richard Milner IV (2016)

Teaching in the Cracks: Openings and Opportunities For Student-Centered, Action-Focused Curriculum - Brian D. Schultz (2017)

Teaching to Transgress; Education as the Practice of Freedom - bell hooks (1994)

Teaching With Vision: Culturally Responsive Teaching in Standards-Based Classrooms - Christine E. Sleeter and Catherine Cornbleth (eds.) (2011)

To Teach: The Journey of a Teacher (2nd ed.) - William Ayers (2001)

We Want to do More Than Survive: Abolitionist Teaching and the Pursuit of Educational Freedom - Bettina L. Love (2019)

"Why Are All the Black Kids Sitting Together in the Cafeteria?" And Other Conversations About Race - Beverly Tatum (1997)

Why We Teach Now - Sonia Nieto (ed.) (2014)

Widening the Circle: The Power of Inclusive Classrooms - Mara Sapon-Shevin (2007)

The Impact of Teaching Modality on Pre-Service Teacher Perceptions of Video Discussions

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Abstract:

Asynchronous video discussion forums provide an opportunity to diminish obstacles that arise during text-based communication. However, a small amount of research has analyzed the use of asynchronous video discussions in fully online courses as well as hybrid offerings that incorporate an online and face-to-face component. This quantitative study explored perceptions of pre-service teachers enrolled in an introductory educational technology course and the integration of Flipgrid for asynchronous video-based discussions in both learning environments. Statistically significant relationships between groups were found related to statements for three of the 4 C's for 21st Century Learning. The findings suggest those enrolled in a hybrid course perceived Flipgrid as a more effective tool related to collaboration, communication, and creativity. In this manuscript, an analysis of findings will be discussed and provide suggestions for future research.

Introduction

Online courses were offered for the first time over three decades ago (Lowenthal & Moore, 2020). Despite the time elapsed and advances in technology, instructor and student interactions have changed little during this span. For higher education faculty, asynchronous text-based discussions are still prominently used as the primary channel of interaction today (Serembus & Murphy, 2020). Although learning management systems (LMS) and approaches to online instructional design evolved, many online courses today still revolve around text-based discussions.

Asynchronous text-based discussions serve as the primary interactive media for a variety of factors. These discussions are versatile and enable learners to connect with peers, course content, materials, and instructors at their convenience (Miskam & Saidalvi, 2019). Research also indicates that they encourage reflection, promote equitable participation, and foster development of inclusive learning communities (Hall, 2015). When used effectively, text-based discussion forums help alleviate sentiments of isolation or disconnectedness that can be found among online learners (Romero-Hall & Vicentini, 2017).

Despite its benefits, text-based discussion forums face inherent weaknesses. For example, they are often criticized for being impersonal and anti-social. In a written forum, social cues are filtered out and learners are more focused solely on task-oriented communication (Lowenthal & Moore, 2020). Prior research indicated text-based discussions make it difficult to display emotion, make others passive in the learning environment, and provide few enjoyable and rewarding interactions (Gurjar, 2020). Text-based discussions also lack social cues such as nonverbal communication and voice variance, which are essential to constructing and understanding meaning (Serembus & Murphy, 2020). For some students, text-based discussions do not cultivate an inclusive learning environment and are often mistaken for busy work. These factors are often used to analyze high attrition rates and why students may not be successful in online courses (Jones-Roberts, 2018).

Research suggests that when students are able to interact and communicate better with peers, they report a stronger sense of social presence and classroom community. These factors contribute to the likelihood of more success in online courses (Green & Green, 2018; Petersen et al., 2020; Stoszkowski, 2018). As such, online educators identified ways to improve asynchronous discussion forums in online courses. Simultaneously, researchers have investigated how emerging technologies, such as those that incorporate asynchronous video capabilities, offer new opportunities for students to interact and communicate with peers and instructors (Delmas & Moore, 2019; Howard & Myers, 2010). However, research has not yet investigated whether student perceptions of asynchronous video discussion boards may differ based upon the learning environment.

To further investigate, this study explored pre-service teachers' perceptions of using Flipgrid as an asynchronous video discussion tool. Non-probability sampling was used to identify participants based on the learning environment. Respondents were enrolled in one of two course learning environments: 1) asynchronous online instruction with no face-to-face component 2) a hybrid with asynchronous online delivery and a face-to-face meeting one day per week totaling 12 times. In the following manuscript, we will report and discuss the results of our inquiry and implications for future research and practice.

Literature Review

The following literature review examined prior research related to video discussion boards, Flipgrid, and the Four C's of Learning. The use of Flipgrid occurred in online and hybrid learning environments within an introductory educational technology course. According to Goodyear et al. (2001), “a learning environment is 1) the physical setting in which a learner or community of learners carry out their work, including all the tools documents and other artifacts to be found in that setting; 2) the social/ cultural setting for such work” (p.6). This definition for the learning environment and discussion board delivery has been adopted for the context of this research paper.

Video-Based Discussion Platforms

Video response technologies serve as social interfaces to provide learners an opportunity to engage and collaborate with peers. Asynchronous video-based discussion platforms offer a forum to interact and communicate at a convenient time and place. This video communication also allows for a visually rich, nonverbal, and secure environment (Lowenthal et al., 2020). In a video discussion forum, a participant records a video of a predetermined length, which can be set by the instructor, utilizing the webcam and microphone on a computer or mobile device. Then, students upload their responses to the discussion where peers can watch on their own time, and if they desire, like, comment, or respond to the video via their own recorded response or text (Clark et al., 2015).

Originally, discussion forums could contain uploaded videos where others could respond with a text-based reply, such as in YouTube, to comment as well as annotate the video (Howard & Myers, 2010; Lowenthal & Mulder, 2017). Although these types of resources are emerging, prior research established promising integration in various educational contexts. Initial studies revealed that students preferred video-based discussions over text-based (Clark et al., 2015; Mohamad Ali & Jabar, 2016). More specifically, group cohesion is an important element of social presence related to the learning environment and has been found to increase with the integration of video discussions (Lowenthal & Moore, 2020). Further, prior research revealed students viewed video-based discussions as a conduit to improve connections between instructors and students (Romero-Hall & Vicentini, 2017).

The usage of video-based discussion platforms may be of particular benefit to students enrolled in an online course to combat feelings of isolation, minimize transactional distance, and foster connections between students based on interests or geographic location. Cognitive presence is also supported with video replies and the interactive conversations that occur between peers and their instructor (Serembus & Murphy, 2020). The capability to reply to other videos is a feature that can help increase the potential applications of learning. These technical capabilities allow for

threaded comments and short video replies to develop critical thinking and communication skills (Mango, 2019).

Lastly, teaching presence is also supported by allowing for collaboration when instructors and students can exchange asynchronous replies about course content. When used effectively, these interactions help support the type of collaboration and engagement students seek in their courses (Gurjar, 2020; Moore, 2016). These platforms, such as Flipgrid, allow students to interact and engage with each other in new ways which help to increase social presence (Jones-Roberts, 2018; Mahmoudi & Gronseth, 2019).

Flipgrid as a Video Discussion Tool

Developed in 2014, Flipgrid is a relatively new learning tool that can be valuable for experiential learning. Flipgrid was initially conceived for educational professionals and featured four specific purposes: a) address the needs of changing learners by enhancing course engagement; (b) increase student involvement during lectures; c) promote verbal reflective development; d) increase instructor awareness of student understanding of course concepts (McClurg & McAndrews, 2016). The technology provides an opportunity for instructors to encourage a student-centered, collaborative learning environment to improve communication skills and allow students to reflect and continually practice skills related to class content (Moore, 2016).

The basis of Flipgrid is founded in the implementation of non-text-based communication for students and instructors. The platform may be beneficial to help facilitate social learning, develop video content creation skills, enhance public speaking, and create a welcoming and inclusive classroom community (Green & Green, 2018; Stoszkowski, 2018). As Flipgrid has become more popular, prior research found that it can be effective to increase student engagement (Mahmoudi & Gronseth, 2019). This platform may be of particular benefit to educators to develop the real-world skill of effective presentations and communication skills. Further, Flipgrid has been found to

significantly impact intentional language skill development within authentic settings (Dettinger, 2018).

Flipgrid allows for interaction and collaboration between students and instructors within all learning environments. A 2020 study by Delmas and Moore found that the use of Flipgrid in undergraduate and graduate healthcare courses promoted a sense of community and connection. Although researchers explored the use of Flipgrid in additional undergraduate and graduate courses in the fields of law (Hall, 2015), engineering (Miskam & Saidalvi, 2019), business (Lowenthal & Moore, 2020), and public speaking (Gerbensky-Kerber, 2017), there has been little related to pre-service and in-service educators, in particular those not enrolled in an online course.

The benefits of Flipgrid also extends into workforce and language development. Bartlett (2018) revealed that the platform increased student perceptions of connectedness to peers and instructors in an online training course. In a study of Malaysian adolescent language learners, Mohamad Ali and Jabar (2016) found that primary students reported video projects as more enjoyable than non-video-based assignments. It also allows educators to engage students of all ages in a variety of learning and assessment activities (Grayson, 2018). To reach each learner in a teacher education course, Flipgrid videos can be recorded and viewed on nearly any electronic device and students can access discussions in a number of ways.

Implementing Flipgrid

Flipgrid is free and available to use on a wide variety of operating systems and platforms such as iOS, Android, and the internet. The internet application may be used as a standalone app on smartphones and tablets as well as a website for internet browsers. The platform can be integrated as a virtual video-based learning platform for discussions, reflections, tutorials, show and tell, and many other uses (Petersen et al., 2020). This allows for a video response such as an original post or a reply to an instructor or peer to be recorded on any device (Mango, 2019). To promote access,

Flipgrid also links to a number of LMS such as Blackboard, Moodle, and Desire to Learn (D2L) (Bartlett, 2018).

Flipgrid provides an opportunity for course discussions to become organic and natural, allowing participants to immediately share ideas and methods with colleagues or fellow students. For the instructor, pre-loaded assessment criteria such as rubrics can be utilized to support course learning objectives. Within Flipgrid, there are two key terms, “grid” and “topic”, which are integral to setting up a discussion for use in a course. Educators create a main grid class or section name, and then create topics for that particular course section (Green & Green, 2018). Within the topics, instructors may provide prompts for students to generate video thread responses based on course content, lectures, or hyperlinked outside resources such as YouTube videos and websites.

There are multiple ways students can access discussions. The use of a quick response (QR) code may be scanned to enter directly within a specific topic prepared for responses (Fahey et al., 2019). A class code or grid code may also be shared via URL to students who enter using their university email address. Instructors establish expectations and may utilize custom rubrics if applicable. To begin a thread, the instructor records an initial welcome video to outline specific points of emphasis or teaching concepts. Afterward, students may respond, view, and reply to all other videos within the specific discussion forum. When the discussion is closed, data of participation may be exported into Microsoft Excel to analyze participation frequency, timestamps of recordings, length of videos, transcriptions, and names of each participant.

Due to Flipgrid’s ability to utilize diverse teaching methods, it helps promote pertinent learning outcomes that should be incorporated in education courses. The platform allows for instructors to integrate multiple student-centered instructional practices such as discussions, think-pair-share, and jigsaw which are known to promote communication and collaboration skills (Arends, 2015). Further, instruction and the implementation of Flipgrid based on the 4 C's of the

21st Century Learning Framework would be especially beneficial to create a forum for instructors to model for pre-service teachers how to teach pertinent knowledge and skills with technology.

The 21st Century Learning Framework

The National Education Association (Supena et al., 2021) recommended that educators, regardless of content area or grade level, should complement their teaching with the Four C's of 21st century skills (critical thinking, communication, collaboration, and creativity) to prepare students for citizenship within the global workforce. As such, pre-service and in-service teacher courses should develop 21st century learning skills to develop globally competitive learners (Walser, 2008). Instructional design models need to recognize the benefit of enhanced learning experiences, skills, and knowledge both in the classroom and online (Oblinger & Oblinger, 2005). The 21st Century Learning Framework creates a learning environment for pre-service educators to implement the 4 C’s to lead innovation when they begin their careers. A brief description of each of the four C's is provided below.

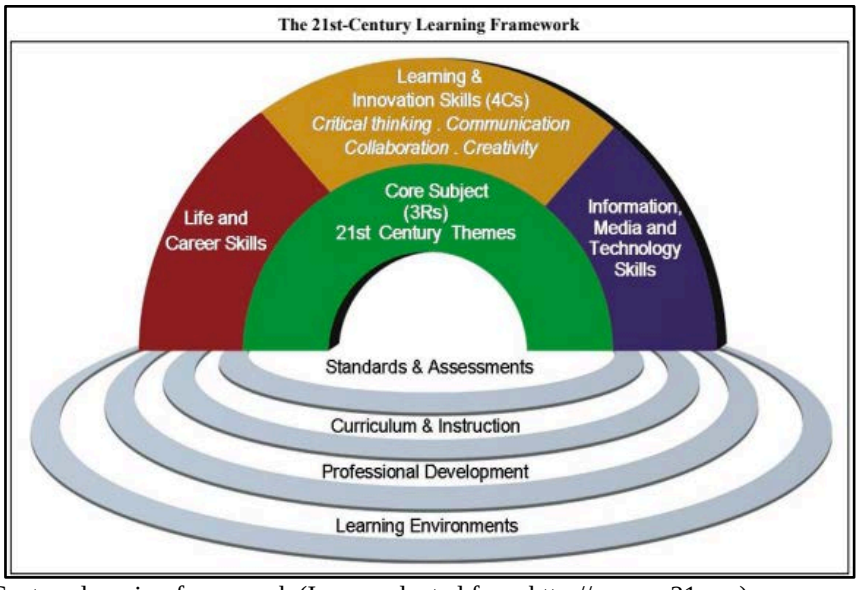

Figure 1. The 21st Century learning framework (Image adapted from http://www.p21.org)

Creativity is an essential skill for educators to develop because it eases the process of managing the complexities of student mastery of content. Although there are many definitions of creativity, Beghetto (2006) defined it as “The ability to offer new perspectives, generate novel and

meaningful ideas, raise new questions, and come up with solutions to ill-defined problems" (p.1). When using creativity within an educational course, instructors can promote discussion that encourages speculation and connections between content and real-world scenarios. Creativity is not necessarily reliant upon accuracy and relevancy but entails learner's freedom to make and learn from mistakes while thinking and communicating freely. In a video-based discussion, creativity is an important factor to allow for students to generate their own meeting and construct new knowledge (Urbani et al., 2017).

Like creativity, critical thinking may be applied in a variety of manners. Paul (1988) viewed it as the ability to reach sound conclusions based on relevant information. Simply put, critical thinking is the ability to assess authenticity, accuracy, and value of knowledge to make informed decisions (Lafer, 2014). Video-based discussions may also provide the opportunity for reflective thought to foster deeper observation and examine the judgment of content in peer responses. Within the 4 C's framework, critical thinking is enviable because it provides learners an opportunity to develop problem-solving skills, an essential disposition for educators in today's schools. The most effective activities to develop critical thinking and creativity incorporate communicative and collaborative learning objectives (Nganga, 2019).

In the recent shift to online learning due to the COVID-19 pandemic, the implementation of effective collaborative and communication abilities is vital in the current reality of teacher education. The usage of the effective implementation of these skills provides people the opportunity to explain their thinking, beliefs, and expectations clearly (Petersen et al., 2020). Related to this purpose, Lawley et al. (2014) outlined the role that communication and collaboration play in the process of building an ideal learning environment. In the current age of globalization and courses moving to online delivery, it is characterized by purposeful mixing and interactions of people from different cultures and backgrounds. This provides educators an opportunity to allow students to

develop these abilities by creating a space, such as one within Flipgrid, and opportunities to collaborate in a safe environment to practice their skills (Liliane & Colette, 2009).

Methodology

Instrument

With a demonstrated need to facilitate interaction and communication in discussion forums in online and hybrid pre-service teacher introductory educational technology courses, this quantitative study examined student perceptions of Flipgrid as a video-based discussion platform. The investigation focused on four research objectives: 1) Flipgrid as a collaborate tool 2) Flipgrid as a critical thinking tool 3) Flipgrid as a communication tool 4) Flipgrid as a creativity tool.

As an exploratory research project centered on student perceptions of this communication technology, the survey included basic demographic questions and 15 statements focused on perceptions of using Flipgrid and the 4 C's of 21st century learning. The instrument included statements from previous studies (Lowenthal & Moore, 2020; Petersen et al., 2020).

Google Forms served as the research platform to collect student responses. The survey utilized a four-point Likert scale after each item that ranged from 1 (Strongly Disagree) to 4 (Strongly Agree). Demographic questions included gender, age, and licensure program of study. Non-probability sampling was used to create two groups for analysis. Respondents self-identified whether they were enrolled in the online or hybrid section of the course on the final question.

Procedures

The survey was disseminated to participants during the next to last week of each course section in an announcement posted in the university's LMS (Blackboard). The announcement was automatically emailed to each student and contained the informed consent, the purpose of the study statement, and a hyperlink to the survey. The survey remained open for 14 days, and students were

sent a reminder announcement email at the end of the beginning of the final week of class to complete the survey.

Upon completion, results were exported into a Google spreadsheet and then downloaded as a .csv file. The data file was uploaded into the Statistical Package for Social Sciences (SPSS) 26.0 and analyzed for descriptive and inferential statistics related to the Likert scale response options and groupings.

Quantitative data was collected to answer the following research questions:

> **RQ1:** Is there a significant difference between online and hybrid student perceptions of Flipgrid as a collaborative tool?
>
> **RQ2:** Is there a significant difference between online and hybrid student perceptions of Flipgrid as a critical thinking tool?
>
> **RQ3:** Is there a significant difference between online and hybrid student perceptions of Flipgrid as a communication tool?
>
> **RQ4:** Is there a significant difference between online and hybrid student perceptions of Flipgrid as a creativity tool?

Participants

Respondents were enrolled in an introductory educational technology course for pre-service teachers at a private Midwestern university and divided into two groups based on the learning environment. One group received asynchronous online instruction, while the other group was enrolled in hybrid sections with an asynchronous online component and a weekly face-to-face class meeting. All participants took the course during the fall, spring, or summer semesters of the same academic year and were taught by the same instructor.

Both groups responded to the same discussion prompts to ensure there was no difference in the usage of Flipgrid. Initially, students in both courses utilized Flipgrid for an introductory asynchronous video-based discussion with peers and the instructor, as well as post responses to the recordings of classmates. Students were provided a unique grid code URL via an instructor announcement to enter the discussion forums for their course. Over the duration of the semester,

students utilized Flipgrid five additional times for a total of six asynchronous video-based discussions. As an incentive, participants who completed the entire survey were awarded three extra credit points on the final course assessment.

The survey generated 76 volunteer responses. Of the respondents who shared their gender, females comprised the majority (*N*=56; 74%), while males totaled 26% (*N*=20). The mean age was 25 years old. The most popular licensure area program was Adolescent to Young Adult (*N*=34; 45%); followed by Middle Grades (*N*=13; 17%); Early Childhood (*N*=12; 16%); Intervention Specialist (*N*=11; 15%); and Early Childhood Intervention Specialist (*N*=6; 8%).

Results

RQ1

The first research question analyzed student perception of Flipgrid as a collaborative tool. An independent sample's *t* test examined the differences of the means of the online and hybrid sections. Data analysis found significant differences between groups for multiple statements (Table 1). Online students were significantly more likely to prefer only text-based discussion boards (M=2.33, SD=.68) compared to those in the hybrid section (M=1.80, SD=.65), $t(74)=3.51$, $p<.001$, d=0.80. Participants in the online section (M=2.72, SD=.45) were statistically more likely to prefer a mixture of text-based discussion boards than hybrid (M=2.20, SD=.69), $t(74)=3.95$, $p<.001$, d=0.89.

To further investigate the *t*-test results above, Cohen's *d* examined the extent of the differences of the means (Cohen, 1990). The effect size for these statements (d=.80; d=.89) fell into Cohen's large effect size category (d=.80) (Cohen, 1988), indicating a large difference between the two means.

Additionally, hybrid students (M=2.98, SD=.16) had a statistically significant higher perception of using Flipgrid as a simple and effective way to collaborate with peers than those

online (*M*=2.71, *SD*=.58), *t*(72)=-2.63, *p*<.02, *d*=0.63. Participants enrolled in the hybrid section (*M*=2.73, *SD*=.60), also reported statistically higher levels of agreement than those enrolled online (*M*=2.33, *SD*=.59), *t*(74)=-2.88, *p*<.01, *d*=0.67. The effect size for both statements fell into Cohen's medium effect size category (*d* = .50) (Cohen, 1988), indicating a medium difference between means.

Based on the data in Table 1, more than 97% (*N*=72) of respondents viewed Flipgrid as useful to receive video feedback from classmates. However, while the majority of the online group (*N*=20; 56%) disagreed they would have preferred only text-based discussions, 44% (*N*=16) agreed with the statement compared to only 12% (*N*=5) in the hybrid section. Additionally, 97% of hybrid respondents felt video messaging was a simple and effective way to communicate, but 23% (*N*=8) of those online disagreed. Lastly, 80% (*N*=32) of hybrid respondents preferred Flipgrid over written discussion forums, while only 39% (*N*=14) pre-service teachers enrolled online agreed.

Table 1

Student Perceptions of Flipgrid as a Collaborative Tool

	N	Online		Hybrid			
		M	SD	M	SD	*t*-test	*p*
It was useful to receive video feedback from my classmates.	76	2.83	.38	2.85	.48	-.17	.868
I would have preferred only using text-based discussion boards.	76	2.33	.68	1.80	.65	3.51**	.001
I would have preferred using a mixture of text-based discussions.	76	2.72	.45	2.20	.69	3.95**	.000
Using video messaging was a simple and effective way to interact with other students.	74	2.71	.58	2.98	.16	-2.63*	.012
I prefer Flipgrid over written discussions.	76	2.33	.59	2.73	.60	-2.88**	.005

*p<.05. **p<.01

Note. 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree.

RQ2

Objective two investigated student perceptions of Flipgrid as a critical thinking tool. Results from an independent sample's *t* test found no significant differences in the mean scores (Table 2).

The majority of online (*N*=32; 89%) and hybrid (*N*=36; 90%) participants perceived Flipgrid as beneficial to their learning, while only one respondent strongly disagreed. While 76% (*N*=57) of all respondents agreed Flipgrid positively affected their motivation for the course, 33% (*N*=12) of online students disagreed compared to only 15% (*N*=6) of those taking the hybrid course. Most students (*N*=65; 86%) agreed Flipgrid helped develop their critical thinking skills of course content, compared to 14% (*N*=11) who disagreed or strongly disagreed.

Table 2

Student Perceptions of Flipgrid as a Critical Thinking Tool

	N	Online		Hybrid			
		M	SD	M	SD	*t*-test	*p*
Flipgrid discussions were beneficial for my learning.	76	2.89	.32	2.88	.40	.17	.870
Using Flipgrid positively affected my motivation for the course.	76	2.67	.48	2.80	.52	-1.16	.248
Flipgrid helped develop critical thinking skills of course content.	76	2.83	.38	2.85	.43	-.18	.858

*p<.05. **p<.01

Note. 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree.

RQ3

Objective three examined Flipgrid as a communication tool. An independent sample's *t* test found a significant difference in the perceptions for online learners (*M*=2.72, *SD*=.57) and those in the hybrid course (*M*=2.95, *SD*=.22), *t*(74)=-2.27, *p*<.03, *d*=0.53, related to suitability to asking and answering questions and making comments. The effect size (*d* =.53) indicated a medium effect (Cohen, 1988). No other significant relationship between variables was revealed.

Respondents did indicate positive feelings about Flipgrid as a communication tool. The majority (*N*=65; 85%) felt the platform improved communication skills, while 91% (*N*=69) indicated it improved their speaking skills. While 95% (*N*=38) of the hybrid group found video replies suitable to discuss a topic, only 78% (*N*=28) online agreed. Lastly, 97% (*N*=74) of respondents agreed or strongly agreed responding to peers was easy.

Table 3

Student Perceptions of Flipgrid as a Communication Tool

	N	Online		Hybrid			
		M	SD	M	SD	*t*-test	*p*
Flipgrid discussion forums improved my communication skills.	76	2.78	.42	2.93	.27	-1.80	.078
The use of Flipgrid helped me to improve my speaking.	76	2.83	.51	2.39	.27	-.97	.336
Video replies are a suitable way to discuss a topic by asking and answering questions and making comments.	76	2.72	.57	2.95	.22	2.27*	0.29
Responding to my peers' videos was easy.	76	2.94	.23	3.00	.08	-1.44	.160

*p<.05. **p<.01

Note. 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree.

RQ4

The final research question explored student perceptions of Flipgrid to facilitate creativity. An independent sample's *t* test revealed a significant difference related to whether students liked using Flipgrid in the class for online learners (M=2.61, SD=.49) and those in the hybrid course (M=2.85, SD=.43), $t(74)$=-2.24, p<.03, d=0.52. Cohen's d (d =.52) indicated a medium effect (Cohen, 1988). No other significant relationship between variables was revealed.

Respondents indicated that Flipgrid encouraged them to be creative. Most participants (N=64; 84%) felt that the platform allowed them to do so, while 75% (N=57) liked using Flipgrid in class. While 88% (N=35) of those in the hybrid section agreed, 39% (N=14) of those online disagreed. Each respondent (N=76; 100%) agreed or strongly agreed the platform was easy to use.

Table 4

Student Perceptions of Flipgrid as a Creativity Tool

	N	Online		Hybrid			
		M	SD	M	SD	*t*-test	*p*
Flipgrid allowed me to be creative.	76	2.57	.61	2.23	.70	1.93	.634
I liked using Flipgrid in this class.	76	2.61	.49	2.85	.43	-2.24*	.028
I used emojis, stickers, and/or borders.	76	2.88	.28	2.74	.22	2.28	.325

*p<.05. **p<.01
Note. 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree.

Discussion

This study suggested that the learning environment played a significant role on student perceptions of Flipgrid as a video-based discussion platform in pre-service educational technology courses. While many previous studies analyzed online learners, this extends the literature by also looking at those taking hybrid courses with online and face-to-face delivery. Further, this adds to the literature by comparing mean perception scores based upon the learning environment.

The success of face-to-face and online learning starts and finishes with interaction (Bartlett, 2018). Although the learning environment may look different based upon teaching modality, the core elements remain unchanged - fostering student collaboration, creativity, critical thinking skills, and communication. Discussion boards serve as a way to recreate types of interactions that traditionally occur in person and are linked to student satisfaction in addition to learning in online courses (Delmas & Moore, 2019). One benefit of online learning is that instructors can integrate media to provide a space for these behaviors while minimizing the transaction distance between students (Hall, 2015). These platforms such as Flipgrid allow students to interact and engage with peers and instructors in ways not previously possible to help increase social presence (Jones-Roberts, 2018; Mahmoudi & Gronseth, 2019).

RQ1 indicated the learning environment played a significant role in how participants perceived Flipgrid as a collaborative tool. These findings indicated students enrolled in a hybrid section with a face-to-face component are significantly more likely to perceive Flipgrid as an effective collaborative tool than text-based discussions. In particular, those enrolled in fully online course sections were significantly more likely to prefer the exclusive integration of text-based discussions. Further, those in the hybrid learning environment were significantly more likely to prefer Flipgrid over a mixture of written discussions. Part of this may be attributed to the social

element added by a weekly face-to-face meeting which allowed for additional relationship development. This would be further evidence of the role group cohesion plays to establish social presence in a learning environment (Lowenthal & Moore, 2020). It is possible that face-to-face interactions combined with those which take place online provide engagement opportunities not available to help increase social presence (Jones-Roberts, 2018).

The second research question analyzed Flipgrid and student perceptions as a critical thinking tool. No significant differences were found which aligned with previous research that indicated Flipgrid was viewed as beneficial to learning and fostered critical thinking skills (Romero-Hall & Vicentini, 2017; Petersen et al., 2020; Serembus & Murphy, 2020). Video conversations necessitate students to speak, make comments, and reply to each other over several weeks. This continued interaction where students have to answer questions from peers and defend a position encourages students to create, organize, and deliver strategic replies supported by course content (Fahey et al., 2019). The responses indicated that student recorded videos are a suitable means for learners to utilize critical thinking skills.

RQ3 revealed Flipgrid is an effective communication development tool for pre-service teachers. Overall, students indicated a positive view of the technology related to this 21st century skill. The platform allowed for improvement of communication skills as well as public speaking. Respondents from the hybrid group were statistically more likely to report positive perceptions about Flipgrid as a useful way to discuss topics. Similar to prior research, students in both groups indicated it is an effective way to develop public oration and other aspects of communication (Green & Green, 2018; Stoszkowski, 2018).

The findings of the final research question suggested that Flipgrid provides an opportunity for creativity. A significant relationship was discovered between students who liked using Flipgrid in the course. Those in the hybrid course sections reported higher levels of enjoyment and would be more likely to use it again. Further, all students indicated they had a positive perception of the

interactive creativity tools provided within Flipgrid such as emojis, stickers, and borders. Since Flipgrid was originally designed for K-12 students and learning environments, prior research found some university students perceived these features as childish for older students (Petersen et al., 2020). Fortunately, Flipgrid provides instructors the ability to enable or disable these options for participants. It is the individual instructor's responsibility to decide the best way to appease these opposing perspectives.

This quantitative study explored pre-service teacher perceptions of Flipgrid as a discussion board platform in online and face-to-face courses. As teacher preparation programs moved online in response to COVID-19, instructors explored new technologies and pedagogies for remote learning. For any technology to be successfully implemented, instructors must be aware of the technological knowledge and expectations placed upon students. It is also essential that any technology adds value to the overall course. While previous research analyzed Flipgrid in an educational setting, we surveyed students in online and hybrid sections of an introductory educational technology course to gain insight on their perceptions of Flipgrid as a discussion platform. This research aimed to better understand whether student perceptions were significantly influenced based upon if they received online or hybrid instruction.

Conclusion

This investigation aimed to explore pre-service teacher perceptions of using Flipgrid in fully online and hybrid courses with a one day a week face-to-face component. Video discussion boards are not a magic elixir. Rather, it is dependent on the learning environment when deciding the frequency and modality of text or video-based discussion boards. The findings suggest that while both groups indicated positive perceptions of Flipgrid, those completely online were statistically more likely to prefer a text-based format. However, the findings suggested there are inherent

benefits to video and asynchronous discussion boards, specifically as a collaboration, communication, and creativity tool for online, hybrid, and face-to-face teacher education courses.

Due to the response rate, findings should not be generalized. Very little research, however, is available related to student perceptions of using Flipgrid dependent on the course learning environment. The vast majority of studies focused on students purely in the online realm without data collection from those in hybrid or seated courses. For instance, does the social element of a face-to-face component add value to video discussion forums? Why do online students prefer text-based online discussions compared to learners in a hybrid setting? The findings suggest Flipgrid was easy to use, participants enjoyed interacting with their peers, and it helped them analyze course content in a meaningful capacity.

Despite these findings, additional research is needed on Flipgrid and class learning environments. For example, are there relationships between students in online, hybrid, or face-to-face courses related to social presence? Further, does the perceived effectiveness of Flipgrid vary depending upon if the population is in-service or pre-service teachers? This study is a first attempt at investigating the variables related to the usage of Flipgrid, a technology which helps facilitate student interaction and engagement with peers in education courses regardless of learning environment.

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Developing a Reliable and Valid ePortfolio Scoring Rubric for Gauging Preservice Teacher Growth in Key Educator Domains

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Abstract:

Electronic portfolios, or ePortfolios, have long been utilized in educator preparation programs to support preservice teachers' growth as reflective practitioners and provide them with a means for showcasing their instructional capabilities. ePortfolios have also been used by educator preparation programs to produce data for programmatic assessment and accreditation (Strudler & Wetzel, 2011). This study explored the creation, validation, and establishment of inter-rater reliability of an ePortfolio scoring rubric in an educator preparation program that desired to create an evaluation instrument to meet these aforementioned aims.

Keywords: ePortfolios, assessment, accreditation, CAEP

Background

With the dawn of the technological age came the wide implementation and use of ePortfolios in educator preparation programs (EPPs). While there is no one definition of an ePortfolio, this instrument tends, within EPPs, to consist of a collection of digital resources or artifacts showcasing a preservice teacher's progress and academic and pedagogical capabilities. ePortfolios are created and personally managed by preservice teachers and can serve as a means of both reflective practice and assessment (Ferns & Comfort, 2014; Lewis, 2017). According to Bates (2010), "ePortfolios enable faculty to see first-hand not only what [preservice] teachers are learning, but how they are learning" and "can play a role in assessing the effectiveness of courses, curricula, and even institutions" (pp. 15–16). As assessment instruments, ePortfolios provide EPPs with a means of gauging the progress of each preservice teacher. More broadly, when ePortfolio data is both aggregated and disaggregated, the data can provide meaningful information about the effectiveness and performance of entire EPPs or particular licensure tracks (van Wyk, 2017).

An ePortfolio's ability to serve as a learning and assessment tool has contributed to its wide use in EPPs. ePortfolios provide preservice teachers the opportunity to reflect on their educational philosophies, instructional practices, classroom management plans, and overall effectiveness. For EPPs, ePortfolios are an attractive assessment tool because the data they provide regarding how and to what degree preservice teachers are meeting state and national teaching standards can be used for ongoing programmatic accreditation (Strudler & Wetzel, 2011).

The overwhelming majority of EPPs in the United States are accredited through the Council for the Accreditation of Educator Preparation Programs (CAEP). CAEP is not only the largest recognized EPP accrediting body, but until May 2021, it was the sole nationally recognized EPP accrediting body. As of November 2021, 462 EPPs throughout the country and Puerto Rico were accredited by CAEP. The CAEP accreditation standards, which serve the dual function of assuring programmatic quality and promoting improvement, are known for their rigor and emphasis on

quality assurance. These standards require EPPs to demonstrate, using multiple measures, that preservice teachers have sufficient content and pedagogical knowledge aligned to state and national standards, namely the Interstate Teacher Assessment and Support Consortium (InTASC) standards. CAEP also requires EPPs to provide evidence of preservice teacher progression throughout the program, and assessments like ePortfolios provide a means for documenting such progress (CAEP, 2021a).

Those evaluating ePortfolios typically use rubrics to assess the quality of the selected artifacts. These rubrics are generally aligned to relevant standards and use specific, measurable language to designate each rubric progression level. Detailed evaluation rubrics have the benefit of guiding preservice teachers to select meaningful artifacts for their ePortfolios. Furthermore, since they are aligned to state and national standards, these scoring rubrics can provide data to EPPs concerning how preservice teachers are performing against important benchmarks. The data gathered can then inform where programmatic improvements are needed (Walters, 2014).

For evaluation instruments such as rubrics, CAEP requires EPPs to exhibit that the instrument is high quality and meets a defined standard of sufficiency. This standard requires demonstrating that the instrument's content is aligned to InTASC and state teaching standards and that each performance level is clearly defined. In addition, EPPs must provide evidence that the data collected is reliable and valid. According to CAEP guidelines for EPP-created assessments, data reliability can be demonstrated through various means, such as test-retest, parallel forms, inter-rater reliability, or the establishment of internal consistency. Data validity can likewise be evidenced through multiple methods; examples include demonstrating construct, content, concurrent, or predictive validity (CAEP, 2021b). The employment and establishment of reliability and validity provide CAEP with sufficient evidence that the assessment in question is trustworthy.

Purpose

The purpose of this study was to create an ePortfolio scoring rubric to evaluate our preservice teachers in critical educator capacities as they progress through our EPP. We further desired to produce reliable and valid data so we could employ this data for CAEP accreditation and use it with confidence to inform future programmatic decisions and initiatives.

Conceptual Framework

To create a quality ePortfolio evaluation instrument that met CAEP guidelines, our EPP began by thoroughly reviewing the 10 InTASC standards, as CAEP requires EPP assessments to be aligned to these standards. We also examined the Danielson Framework for Teaching Evaluation Instrument (Danielson, 2014), as this educator assessment already has established reliability and validity and is written as a rubric with clear, distinguishable progression levels (Milanowski, 2011). The 2013 Danielson Framework consists of four domains: Planning and Preparation, Classroom Environment, Instruction, and Professional Responsibility. Likewise, the 10 InTASC standards are organized into four domains: The Learner and Learning, Content Knowledge, Instructional Practice, and Professional Responsibility. While many school systems and administrators use the Danielson Framework to evaluate and improve current practicing teachers' effectiveness, the InTASC standards serve as the basis for preservice teacher evaluation and assessment within many EPPs.

In addition to requiring EPPs to demonstrate preservice teacher proficiency against the InTASC standards, CAEP requires EPPs to demonstrate candidate proficiency in other domains, such as technology and diversity. Concerning technology, the CAEP 2022 standards state that EPPs must ensure that candidates can "model and apply national or state-approved technology standards to engage and improve learning for all students" (CAEP, 2021c, p. 1). Regarding diversity, the CAEP 2022 standards state that EPPs must demonstrate that their candidates can "effectively work with diverse P-12 students" (CAEP, 2021c, p. 1).

Our EPP faculty extensively studied the CAEP standards, the InTASC standards and domains, and the Danielson Framework, looking for overlap and distinction. Our goal was to integrate aspects of all the domains inherent to the Danielson Framework and the InTASC standards, as well as the CAEP components of technology and diversity. As a result, we created an ePortfolio scoring rubric that centers on the following six key educator domains:

- Domain 1 – Preparation (or Command of Content Knowledge)
- Domain 2 – Classroom Environment
- Domain 3 – Planning, Instruction, and Assessment
- Domain 4 – Professional Responsibility
- Domain 5 – Diversity
- Domain 6 – Technology

A seventh domain, reflecting grammar, spelling, and writing mechanics, was also included to encourage high-quality writing throughout the ePortfolio. The language used in the Danielson Framework Teaching Evaluation Instrument and the InTASC, CAEP, and International Society of Technology Educators (ISTE) standards served as the basis for the language used in the ePortfolio scoring rubric. We also aligned our rubric to the Ohio Standards for the Teaching Profession (OSTP) since our EPP is located at a university in Ohio.

Methods

Instrument Construction

After our EPP faculty determined the domains of the ePortfolio scoring rubric, we worked to define the competencies that should be evaluated in each domain and write the language for each domain's rubric progression levels. We chose a four-point scoring scale, with four representing distinguished, three representing proficient, two representing basic, and one representing unsatisfactory. Emphasis was placed on integrating Danielson, InTASC, ISTE, and CAEP standard language while defining specific performance indicators for each rubric level. Using language that

demonstrates a developmental sequence between each rubric level provides reviewers with explicit guidelines when evaluating preservice teacher performance and offering feedback (CAEP, 2021b). For the domains pertaining to Planning, Instruction, and Assessment, Professional Responsibility, and Diversity, our EPP divided each domain into two parts to ensure that all the desired competencies were evaluated. Once an initial draft of the instrument was complete, the faculty conducted two rounds of revision. The rubric was then piloted to a sample of junior and senior preservice teachers (n = 10) to solicit their input. The preservice teachers' input was applied, and the rubric was ready to undergo validity and reliability evaluations. The finalized ePortfolio scoring rubric is available in Appendix A. Table 1, which appears below, summarizes the competencies assessed in each domain of the ePortfolio rubric and highlights which Danielson components, InTASC standards, ISTE standards, CAEP standards, and OSTP align to each domain.

Table 1

Competencies Assessed in the Domains of the ePortfolio & Alignment to the Standards

Domain	Competencies Assessed through Evaluation of Candidate Artifacts	Standard Alignment
Preparation	The candidate demonstrates that he/she has command of the subject he/she teaches.	InTASC 4 CAEP R1.2, R1.3 OSTP 2.1, 2.2, 2.4, 2.5 Danielson 1a
Classroom Environment	The candidate demonstrates his/her belief in the importance of creating a classroom environment with norms that value learning, hard work, perseverance, and respect.	InTASC 3 CAEP R1.3 OSTP 1.3, 5.1, 5.2, 5.3, 5.4, 5.5 Danielson 2a, 2b

Domain	Competencies Assessed through Evaluation of Candidate Artifacts	Standard Alignment
Planning, Instruction, and Assessment	The candidate demonstrates his/her ability to design coherent, developmentally appropriate instruction with effective assessment. Part 1 of this domain evaluates candidate planning and instruction. Part 2 of this domain evaluates candidate assessment of student learning.	InTASC 1, 6 CAEP R1.1, R1.2, R1.3 OSTP 1.2, 1.5, 3.1, 3.2, 3.3, 4.1, 4.3, 4.5, 4.6 Danielson 1e, 1f, 3c
Professional Responsibility	The candidate demonstrates his/her belief in the importance of engaging in professional learning and using evidence to continually evaluate progress. The candidate seeks appropriate leadership roles, collaborates with others, participates in professional community, and demonstrates professionalism. Part 1 of this domain evaluates candidate engagement in professional learning. Part 2 of this domain evaluates candidate understanding of ethical conduct.	InTASC 9, 10 CAEP R1.4 OSTP 7.1, 7.2, 7.3 Danielson 4e, 4f
Diversity	The candidate demonstrates his/her ability to create culturally responsive, inclusive learning environments where all students are afforded access to high standards and meaningful learning.	InTASC 2 CAEP R1.1, R1.2, R1.3 OSTP 1.1, 1.2, 1.3, 1.4, 1.5 Danielson 1b
Technology	The candidate demonstrates his or her ability to use and share e-learning tools that maximize deep learning on behalf of students. Part 1 of this domain evaluates candidate investment in professional learning networks (PLNs). Part 2 of this domain evaluates candidate integration of technology into instructional practice.	InTASC 7, 8 CAEP R1.3 OSTP 4.7, 6.3, 7.3 ISTE 2.4, 2.5
Grammar, Spelling, and Writing Mechanics	Candidate demonstrates professional writing.	N/A

Establishment of Content Validity

The Lawshe Method

As noted previously, CAEP accepts multiple means for establishing instrument validity. Our EPP chose to focus specifically on establishing the content validity of our ePortfolio scoring rubric. Establishing content validity involves evaluating the extent to which an instrument represents all facets of a given construct (Huck, 2012). One means of establishing content validity is the Lawshe Method. The Lawshe Method gauges agreement among raters with respect to how essential a particular item is. The raters chosen to evaluate the instrument should be subject matter experts (SMEs). When evaluating each item in the instrument, the SMEs are asked to determine if the skill measured by the given item or construct is essential, useful but not essential, or not necessary to the item/construct in question. If more than half of the SMEs rate an item as essential, then it has some content validity, though the content validity grows as more SMEs agree that a particular item is essential. The content validity ratio (CVR) is calculated as follows: $CVR= (\underline{n_e - N/2})/(N/2)$, where n_e is the number of experts who chose essential and N is the total number of experts. This formula returns values from +1 to -1. A positive value signifies that at least half of the SMEs rated the item as essential. The mean CVR across all items in the instrument, known as the Content Validity Index (CVI), may also be calculated and utilized to indicate overall content validity. Table 2 displays the critical minimum CVR values. These values enable an instrument evaluator to determine the CVR needed to establish content validity when a given number of SMEs participate in the validation process (Lawshe, 1975).

Table 2

Minimum Values for Content Validity Using the Lawshe Method

# of Reviewers	Minimum Value
5	0.99
6	0.99
7	0.99
8	0.75
9	0.78
10	0.62
11	0.59
12	0.56
13	0.54
14	0.51
15	0.49
20	0.42
25	0.37
30	0.33
35	0.31
40	0.29

Lawshe Method Participants

42 SMEs participated in the content validity review of our EPP's ePortfolio scoring rubric. We initially asked sixty people to participate and 42 responded affirmatively, equating to a 70% response rate. We purposefully chose the initial 60 people so they stratified a particular sample. Of these 60 people, 25% were current PK-12 teachers, 25% were current PK-12 administrators, 25% were current senior preservice teachers, and 25% were current teacher education faculty. Of the 42 who elected to participate, 36% (n = 15) were current PK-12 teachers, 19% (n = 8) were current PK-12 administrators, 21% (n = 9) were current senior preservice teachers, and 24% (n = 10) were current teacher education faculty. Those who participated were asked to read the target level for each scoring rubric domain and rate each component as essential, useful but not essential, or not necessary. Then, using the Lawshe formula, we calculated the CVR score for each domain and the overall CVI for the entire scoring rubric.

Establishment of Inter-rater Reliability

As with content validity, there are several means for establishing inter-rater reliability. Our EPP chose to use the method of percent of exact agreement, along with the calculation of Cohen's kappa, κ. Using the method of percent of exact agreement, two education faculty reviewers individually evaluated an ePortfolio from a candidate in each of our 10 initial licensure programs. If both reviewers scored an artifact in one of the domains with the same rating, we recorded this as an agreement. If the reviewers scored an artifact differently, we recorded this as a disagreement (Huck, 2012). The percent of exact agreement was calculated across all 10 licensure areas for each domain in our ePortfolio rubric. The percent of exact agreement for the entire rubric was also calculated. Establishing inter-rater reliability using the percent of exact agreement requires a minimum agreement of 75% among scorers, with no ratings more than one level apart when there are four or fewer levels in the scoring rubric (Chaturvedi & Shweta, 2015). Before the faculty reviewers assessed the candidates' ePortfolios, they received training on what criteria to look for to ensure that a given rubric progression level was satisfied. According to Pufpaff et al. (2015), such training is critical to enhancing scorer reliability and consensus when using rubrics. Appendix B contains the training guide provided to the faculty reviewers.

In addition to the percent of exact agreement, Cohen's kappa, κ, was calculated for each of the domains and the entire scoring rubric to account for the possibility of agreement by chance. Calculating κ involves the application of the following formula: $\kappa = (p_0 - p_e)/(1 - p_e)$, where p_0 is the relative observed agreement among raters and p_e is the probability of agreement by chance. The value of κ can range from -1 to +1. Once κ is calculated, it is interpreted according to the following criteria: values ≤ 0 indicate no agreement; values between 0.01–0.20 reflect slight agreement; values between 0.21–0.40 reflect fair agreement; values between 0.41– 0.60 reflect moderate agreement; values between 0.61–0.80 reflect substantial agreement; and values between 0.81– 1.00

reflect almost perfect agreement (McHugh, 2012). As a benchmark for our scoring rubric, we aimed to ascertain substantial agreement among the faculty raters ($\kappa \geq 0.61$).

Results

Content Validity

Overall, the CVI score for the ePortfolio rubric was 0.91, which is well above the minimum value (0.29) needed to establish content validity when 40+ SMEs review the instrument. Table 3 presents the individual CVR scores for each domain. These scores, too, are above the minimum value needed for establishing the content validity of each domain of the scoring rubric.

Table 3
CVR and Overall CVI scores for the ePortfolio Scoring Rubric

Domain	CVR
1) Preparation (Command of Content Knowledge)	0.95
2) Classroom Environment	0.95
3a) Planning, Instruction, and Assessment - (Part 1 - Planning and Instruction)	1.00
3b) Planning, Instruction, and Assessment - (Part 2 - Assessment)	1.00
4a) Professional Responsibility - (Part 1: Professional Learning)	0.90
4b) Professional Responsibility - (Part 2: Ethical Conduct)	0.90
5) Diversity	0.95
6a) Technology - (Part 1 - Investing in PLNs)	0.76
6b) Technology - (Part 2 - Integrating Technology into Instructional Practice)	0.86
7) Grammar, Spelling, and Writing Mechanics	0.86
OVERALL CVI	0.91

Inter-rater Reliability

Table 4 presents the percent of exact agreement for each rubric domain across all 10 of our initial licensure programs and the overall percent of exact agreement for the entire ePortfolio scoring rubric. We must note that when two faculty reviewers did have different scores for a particular domain, these scores were no more than one level apart and thus met the criteria needed to establish scorer reliability. The overall percent of exact agreement for the entire rubric was 85%, which exceeded the 75% benchmark.

Table 4

Percent of Exact Agreement for the ePortfolio Scoring Rubric

Domain	Percent of Exact Agreement (%)
1) Preparation (Command of Content Knowledge)	100
2) Classroom Environment	90
3a) Planning, Instruction, and Assessment - (Part 1 - Planning and Instruction)	90
3b) Planning, Instruction, and Assessment - (Part 2 - Assessment)	80
4a) Professional Responsibility - (Part 1: Professional Learning)	80
4b) Professional Responsibility - (Part 2: Ethical Conduct)	80
5) Diversity	80
6a) Technology - (Part 1 - Investing in PLNs)	80
6b) Technology - (Part 2 - Integrating Technology into Instructional Practice)	90
7) Grammar, Spelling, and Writing Mechanics	80
OVERALL Percent of Exact Agreement	85

Cohen's kappa, κ, was also calculated for each domain and the entire rubric to rule out the possibility of agreement by chance. Table 5 reports these kappa values. The kappa values for each domain and the overall average kappa for the whole rubric surpassed the 0.61 criterion, thus indicating substantial agreement among the raters.

Table 5

Cohen's kappa, κ, for the ePortfolio Scoring Rubric

Domain	Cohen's kappa, κ
3) Preparation (Command of Content Knowledge)	1
4) Classroom Environment	0.78
3a) Planning, Instruction, and Assessment - (Part 1 - Planning and Instruction)	0.80
3b) Planning, Instruction, and Assessment - (Part 2 - Assessment)	0.67
4a) Professional Responsibility - (Part 1: Professional Learning)	0.68
4b) Professional Responsibility - (Part 2: Ethical Conduct)	0.67
5) Diversity	0.67

6a) Technology - (Part 1 - Investing in PLNs)	0.70
6b) Technology - (Part 2 - Integrating Technology into Instructional Practice)	0.79
7) Grammar, Spelling, and Writing Mechanics	0.69
OVERALL Cohen's kappa, κ	0.75

Discussion

The Value of ePortfolios in EPPs

The goal of this study was to develop, refine, and establish the content validity and reliability of an ePortfolio scoring rubric so our EPP and perhaps others could trustworthily employ this instrument to gauge preservice teacher performance in key educator domains. Through creating and maintaining an ePortfolio, preservice teachers can share their teaching philosophies, develop their professional dispositions, and think about how to best represent themselves as future teachers.

When an ePortfolio is implemented as a learning tool within an EPP, preservice teachers are able to utilize it to enhance their self-directed learning (Beckers et al., 2016; van Wyk, 2017). In our EPP, the ePortfolio is created at the outset of the preservice teacher's educational journey and evaluated at two key transition points in the preservice teacher's progression: application to the education program and application to student teaching. As such, the ePortfolio is meant to be updated over time as the preservice teacher advances through the program. For example, a lesson plan written by a freshman or sophomore preservice teacher and used as an artifact for the first evaluation would most likely differ from a lesson plan written by the same preservice teacher during his or her senior year. The latter lesson plan would most likely contain more substantial evidence of planning to meet the needs of diverse learners, a deeper understanding of the content being taught, and overall, tighter alignment between objectives, standards, activities, and assessments. The ePortfolio rubric language for the domain of Planning, Instruction, and Assessment is written as such that a stronger lesson plan would score higher than a beginning lesson plan.

This example of how lesson plan writing skills can be strengthened over time within an EPP helps illustrate how creating and maintaining an ePortfolio allows a preservice teacher to participate in a transformative learning process (Garrett, 2011). Garrett (2011) explains that this transformative learning process, when incorporating ePortfolios, involves using metacognitive learning strategies, engaging diverse approaches, and evaluating one's own learning process. All of these are evident when preservice teachers submit a variety of ePortfolio artifacts that best showcase their abilities and growth as preservice teachers. Throughout the process of collecting, compiling, and reflecting on authentic evidence, preservice teachers take ownership of their learning (van Wyk, 2017).

As part of our ePortfolio criteria, the preservice teachers must accompany their selected artifacts for each domain with a reflection that describes the artifact, how it demonstrates the competencies highlighted in that given domain, and the growth and learning that took place as the artifact was produced. These reflections intend to capture the lived experiences (positive and negative) of the preservice teachers during the teaching practice sessions that occurred as the artifact was created and implemented (Garrett, 2011). Belgard (2013) and Jones (2010) both state that reflection remains a crucial part of the repertoire of a good teacher, and through creating and maintaining an ePortfolio, preservice teachers can develop this skill by consistently reflecting on their teaching practices before, during, and after instruction. Engaging in this type of routine reflection also provides preservice teachers with opportunities to make valuable connections between the educational theory they learn through their coursework and practice they experience through their field and clinical work (Boulton & Hramiak, 2012; Ndamba, 2007).

The Importance of Assessment Reliability and Validity in EPPs

Validating and establishing inter-rater reliability for our ePortfolio scoring rubric was critical to ensuring that we created an assessment that truly measured what it claimed to measure and that scoring consistency existed among raters (Cronbach, 1980 & Stemler, 2004). With established reliability and validity, our ePortfolio scoring rubric stands as an assessment tool that

can produce data from which we can confidently make inferences about many important programmatic aspects, such as candidate performance and competency, programmatic strengths and weaknesses, and future programmatic needs and initiatives. Our ePortfolio scoring rubric also meets CAEP's standards for EPP-created assessments (CAEP, 2021b), thus testifying to its quality and providing us with important assessment data we can employ for ongoing accreditation.

Challenges and Considerations

While an ePortfolio can serve as a reliable and valid means for evaluating preservice teacher progress and capabilities, there are challenges that can arise and important issues to consider. Some possible challenges of implementing the ePortfolio process relate to timelines and communication. Faculty evaluating ePortfolios may want to establish a uniform timeline for providing feedback to preservice teachers for consistency. Another element to consider is setting a firm deadline for ePortfolio submission each semester, especially if the EPP employs the ePortfolio as a major assessment or gatekeeper, on which a preservice teacher must attain a certain score to progress through specific transition points in the program (e.g., acceptance to the program, acceptance to student teaching, completion, etc.). Faculty must further consider how they will communicate to preservice teachers the guidelines for creation, completion, and submission of the ePortfolio. The creation of our ePortfolio takes place in a mandatory, introductory-level instructional technology class taken by all education majors or preservice teachers. This ensures the expectations are transparent to all.

Faculty must also be on the same page concerning the criteria for creating and evaluating the ePortfolios. This underscores the importance of engaging faculty reviewers in scorer training. Such training can include what elements must be evident in the ePortfolio artifacts to ensure that a given rubric progression level is satisfied (Pufpaff et al., 2015). This training can also include a review of previously assessed ePortfolios so that scorers can view concrete examples of appropriate layout, formatting, and the type of evidence needed to score at a given level. Training of this nature is

critical to enhancing scorer reliability. If the EPP updates the expectations of an earlier version of the ePortfolio, which is likely to happen when state, specialized professional association, or national teaching standards change, faculty need to determine how they will successfully transition to the newer version of the ePortfolio and communicate the new guidelines to both preservice teachers and faculty. Again, these challenges and considerations point to the need for full faculty engagement in the process of utilizing ePortfolios and scoring them within the EPP and ongoing training and communication within the department.

Conclusion

In this manuscript, we have described the process of developing, refining, and establishing validity and reliability for an ePortfolio learning tool for use in EPPs. The instrument we created stands as a reliable and valid tool that not only our EPP can utilize to assess our candidates, but one we would like to share with other EPPs looking to evaluate their own preservice teachers' progress and capacity in critical educational areas. Previous research has established the importance and benefits of utilizing an ePortfolio system: it is an empowering and attractive way of fostering self-directed learning and providing evidence of achievement, particularly in the context of an EPP. Creating an ePortfolio enables preservice teachers to engage in important self-management skills, such as formulating specific goals and short-term objectives and setting high standards to achieve excellent results or performance through the submitted artifacts (van Wyk, 2017). Having a clearly articulated, reliable, and valid scoring rubric to assess preservice teacher ePortfolio artifacts allows EPPs to gauge how their candidates are performing in key competencies with a sense of confidence and fidelity. The data gathered from such an evaluation instrument can then serve as evidence for ongoing CAEP accreditation, as well as trustworthily inform plans for future improvement.

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Appendix A

ePortfolio Scoring Rubric

An adaptation and integration of the 2013 Danielson Framework, 2022 CAEP standards, InTASC standards, ISTE standards, and OSTP

DOMAIN 1: Preparation

The candidate presents artifact(s) and accompanying descriptions, which demonstrate that he/she has command of the subject he/she teaches. These artifacts are assessed according to the following criteria:

Standard	Distinguished (4)	Proficient (3) (TARGET)	Basic (2)	Unsatisfactory (1)
InTASC 4 CAEP R1.2, R1.3 Danielson 1a OSTP 2.1, 2.2, 2.4, 2.5	The candidate exhibits wide knowledge of key concepts in the content area and how these topics relate within the field itself and also to other content areas/fields. The candidate demonstrates significant understanding of needed prior learning and prerequisite relationships in the content area. The candidate demonstrates familiarity with several effective teaching strategies in the content area and demonstrates awareness of potential student misconceptions.	The candidate exhibits solid knowledge of key concepts in the content area and how these concepts relate to one another. The candidate demonstrates satisfactory understanding of essential prior learning and prerequisite relationships in the discipline. The candidate shows his/her familiarity with effective teaching strategies in the content area.	The candidate shows that he/she is aware of key concepts in the content area but displays a lack of understanding regarding how these concepts relate to one another. The candidate indicates some understanding of essential prior learning, but such knowledge may be inaccurate or incomplete. The candidate reflects some familiarity with appropriate teaching strategies in the content area.	The candidate displays content errors and little understanding of essential prior knowledge necessary to student learning in the content area. The candidate shows no understanding of teaching strategies suitable to student learning in the content area.

Score: _____

DOMAIN 2: Classroom Environment

The candidate presents artifact(s) and accompanying descriptions that demonstrate his/her belief in the importance of creating a classroom environment with norms that value learning, hard work, perseverance, and respect. These artifacts are assessed according to the following criteria:

Standard	Distinguished (4)	Proficient (3) (TARGET)	Basic (2)	Unsatisfactory (1)
InTASC 3 CAEP R1.3 Danielson 2a, 2b OSTP 1.3, 5.1, 5.2, 5.3, 5.4, 5.5	The candidate demonstrates significant understanding of the importance of establishing positive social interaction and active engagement in the classroom in order to create an environment where there is a shared belief in the value of learning and where students feel valued and comfortable taking intellectual risks. The candidate conveys	The candidate demonstrates satisfactory understanding of the classroom as a place where learning is valued by all. High expectations for both learning and hard work are the standard established for most students. The candidate demonstrates an effort to create an environment where students understand their responsibility as learners and put forth effort to learn.	The candidate demonstrates minimal understanding of classroom culture. Task completion rather than the quality of the work completed is the focus of the classroom. The candidate conveys expectations for learning that are minimal.	The candidate fails to demonstrate an understanding of the importance of establishing positive social interaction and active engagement in the classroom to create a classroom culture committed to learning. The candidate conveys low or no expectations for student achievement.

	significant expectations for learning for all students and insists on hard work, responsibility and ownership on behalf of all students.			

Score: _____

DOMAIN 3: Planning, Instruction & Assessment

The candidate presents artifact(s) and accompanying descriptions that demonstrate his/her ability to design coherent, developmentally appropriate instruction with effective assessment. These artifacts are assessed according to the following criteria:

Standard	Distinguished (4)	Proficient (3) (TARGET)	Basic (2)	Unsatisfactory (1)
InTASC 1 CAEP R1.1, R1.2, R1.3 Danielson 1e, 3c OSTP 1.2, 1.5, 4.1, 4.3, 4.5, 4.6	The candidate creates instructional activities that follow a clear, appropriate sequence. These activities are aligned to measurable learning goals and standards and are designed to engage students in developmentally appropriate & high-cognitive demand activity. The learning activities are appropriately differentiated for individual learners. Student voice/choice is included in the learning activities.	The candidate creates instructional activities which are mostly aligned with measurable learning goals and standards. The activities are arranged in a sequence fitting to the students. The learning activities represent cognitive challenge. There is some differentiation for different types of students.	The candidate presents instructional activities which are somewhat aligned with the learning goals and standards. However, the sequence of activities is either unclear or uneven, and the level of challenge is inappropriate (either too easy or too challenging). There is minimal differentiation for different types of students.	The candidate presents instructional activities that are poorly aligned with the learning goals and standards. The activities do not follow an orderly sequence are not designed to engage students in active learning, and have impractical pacing/timelines. Differentiation does not occur.
InTASC 6 CAEP R1.3 Danielson 1f OSTP 3.1, 3.2, 3.3	The candidate demonstrates that all the instructional goals are evaluated by an assessment plan with clear criteria for appraising student work. All assessment methods indicate modification for individuals or groups of students as appropriate. Formative assessment is thoroughly planned for, included, and well-designed. The candidate shows a clear plan for analyzing and using assessment data to inform instruction.	The candidate demonstrates that most instructional goals are evaluated by an assessment plan with criteria for appraising student work. Some assessment methods have been modified for individuals or groups of students as appropriate. Formative assessment is included and adequately designed. The candidate shows a satisfactory plan for using assessment data to inform instruction.	The candidate demonstrates that a few of the instructional goals are evaluated by an assessment plan. The criteria for appraising student work are minimal. A few of the assessments have been modified for individuals or groups of students. Formative assessment is not included, or it is not adequately designed. The candidate shows a vague plan for using assessment data to inform instruction.	The candidate does not demonstrate that instructional goals are evaluated by an assessment plan with criteria for appraising student work. Assessments have not been modified for individuals or groups of students. Formative assessment is not included, nor is a plan for using assessment data to inform instruction.

Average Score for both rows: _____

DOMAIN 4: Professional Responsibility

The candidate presents artifact(s) and accompanying descriptions that demonstrate his/her belief in the importance of engaging in professional learning and using evidence to continually evaluate progress. The candidate seeks appropriate leadership roles, collaborates with others, participates in professional community, and demonstrates professionalism. These artifacts are assessed according to the following criteria:

Standard	Distinguished (4)	Proficient (3) (TARGET)	Basic (2)	Unsatisfactory (1)
InTASC 9 CAEP R1.4 Danielson 4e OSTP 7.2	The candidate engages in ongoing professional learning and presents detailed reflections on how this learning can be employed to improve his/her teaching practices.	The candidate engages in some professional learning and presents reflections on how this learning can be employed to improve his/her teaching practices.	The candidate participates to a limited extent in professional learning and presents vague reflections on how this learning can be employed to improve his/her teaching practices.	The candidate engages in no professional learning to increase knowledge or skills.
InTASC 10 CAEP R1.4 Danielson 4f OSTP 7.1, 7.3	The candidate demonstrates that he/she can be depended on to uphold the highest standards of honesty and integrity, take a positive leadership role with colleagues, and work faithfully and ethically to serve ALL students and school communities.	The candidate demonstrates high standards of honesty and integrity and shows a desire to actively and ethically serve students and school communities.	The candidate conveys the importance of serving students and school communities honestly and ethically.	The candidate fails to convey the importance of serving students and school communities honestly and ethically.

Average Score for both rows: _____

DOMAIN 5: Diversity

The candidate presents artifact(s) and accompanying descriptions that demonstrate his/her ability to create culturally responsive, inclusive learning environments where all students are afforded access to high standards and meaningful learning. These artifacts are assessed according to the following criteria:

Standard	Distinguished (4)	Proficient (3) (TARGET)	Basic (2)	Unsatisfactory (1)
InTASC 2 CAEP R1.1, R1.2, R1.3 Danielson 1b OSTP 1.1, 1.2, 1.3, 1.4, 1.5	The candidate uses understanding of individual differences and diverse cultures and communities to create responsive and inclusive learning environments that support each learner in achieving high standards. The candidate examines any personal biases as he/she plans instruction for diverse learners.	The candidate uses understanding of differences to create responsive and inclusive learning environments that support most learners in achieving high standards. The candidate addresses any personal biases as he/she plans instruction for diverse learners.	The candidate uses understanding of differences to create inclusive learning environments that support some learners in achieving high standards.	The candidate does not create inclusive learning environments that support learners in achieving high standards.

Score: _____

DOMAIN 6: Technology

The candidate presents artifact(s) and accompanying descriptions that demonstrate his or her ability to use and share e-learning tools that maximize deep learning on behalf of students. These artifacts are assessed according to the following criteria:

Standard	Distinguished (4)	Proficient (3) (TARGET)	Basic (2)	Unsatisfactory (1)
InTASC 7 CAEP R1.3 ISTE 2.4 OSTP 6.3, 7.3	The candidate dedicates a significant amount of time to collaborating with colleagues and students to improve practice, discover and share e-resources and ideas, and solve problems.	The candidate dedicates a satisfactory amount of time to collaborating with colleagues and students to improve practice, discover and share e-resources and ideas, and solve problems.	The candidate dedicates minimal time to collaborate with colleagues and students to improve practice, discover and share e-resources and ideas, and solve problems.	The candidate does not dedicate any time to collaborating with colleagues or students to improve practice, discover and share e-resources and ideas, and solve problems.
InTASC 8 CAEP R1.3 ISTE 2.5 OSTP 4.7	The candidate creates innovative, standards-aligned learning activities that integrate digital tools and resources to maximize active, deep student learning.	The candidate creates original learning activities that integrate digital tools and resources to engage active student learning and adequately align with content area standards.	The candidate creates learning activities that integrate digital tools and resources and somewhat align with content area standards.	The candidate creates learning activities that integrate digital tools and resources that do not deepen student learning and are not aligned with content area standards.

Average Score for both rows: _____

Grammar, Spelling, & Writing Mechanics

Professional writing is critical to the field of education. As such, the candidate's writing across all the artifacts in the ePortfolio will be assessed using the following criteria:

Distinguished (4)	Proficient (3) (TARGET)	Basic (2)	Unsatisfactory (1)
The writing is clear, well-developed, and free or almost free of errors.	The writing is clear. There are occasional errors, but they do not disrupt nor confuse the reader.	The writing has many errors that are distracting to the reader. Editing is needed.	There are so many errors that the reader is confused. Significant revision and editing are needed.

Score: _____

OVERALL SCORING	
SUBMISSION 1: Application to Program	SUBMISSION 2: Application to Student Teaching
Domain 1 (Preparation) ____ / 4	Domain 1 (Preparation) ____ / 4
Domain 2 (Classroom Environment) ____ / 4	Domain 2 (Classroom Environment) ____ / 4
Domain 3 (Planning, Instruction, Assess.) ____ / 4	Domain 3 (Planning, Instruction, Assess.) ____ / 4
Domain 4 (Professional Responsibility) ____ / 4	Domain 4 (Professional Responsibility) ____ / 4
Domain 5 (Diversity) ____ / 4	Domain 5 (Diversity) ____ / 4
Domain 6 (Technology) ____ / 4	Domain 6 (Technology) ____ / 4
Grammar, Spelling, & Writing Mechanics ____ / 4	Grammar, Spelling, & Writing Mechanics ____ / 4
Total _____ / 28	Total _____ / 28

Appendix B

ePortfolio "Look Fors"

A guide to assist with reliable ePortfolio evaluation

Domain 1: Preparation (or Command of Content Knowledge)

To Score a 3: In his/her reflection, the candidate articulates how the chosen artifact displays his/her knowledge of the important concepts in the discipline, **as well as** relationships or connections between important concepts in the field. The candidate **also** discusses how the artifact showcases his/her familiarity with effective pedagogical approaches in the content area. The candidate's artifact aligns with this written reflection.

To Score a 4: All the criteria to score a 3 are met, **PLUS** the candidate presents in his/her reflection a more overt examination of the content-specific prerequisite relationships and cognitive structures (teaching and learning processes or frameworks) that need to be enacted to ensure understanding. **In addition**, the candidate reflects on potential student misconceptions.

Domain 2: Classroom Environment

To Score a 3: In his/her reflection, the candidate articulates how the chosen artifact demonstrates his/her philosophy and/or intent to create a classroom environment and/or culture where learning is valued by all. The candidate discusses how the artifact demonstrates his/her high expectations for both learning and hard work **and** how the artifact promotes students growing in their understanding of their role as learners, who are expected to expend effort to learn. The candidate's artifact aligns with this written reflection.

To Score a 4: All the criteria to score a 3 are met, **PLUS** the candidate discusses how the chosen artifact reflects the importance of establishing positive social interaction and active engagement in the classroom so that students are comfortable taking intellectual risks.

Domain 3: Planning, Instruction, and Assessment

To Score a 3:

Part 1: In his/her reflection, the candidate discusses how the learning activities in the chosen artifact align with the instructional goals and standards and how the activities follow an organized sequence suitable to the students. The candidate **also** discusses the presence of sufficient challenge in the activities, **as well as** the incorporation of differentiation to promote student learning. The candidate's artifact aligns with this written reflection.

Part 2: In his/her reflection, the candidate discusses the assessment plan he/she created in the chosen artifact. This plan includes several assessments, including formative assessments. The candidate describes how he/she will use assessment data to inform instruction and/or next steps. The candidate **also notes** how the assessments have been modified for various students as appropriate. The candidate's artifact aligns with this written reflection.

To Score a 4:

Part 1: All criteria to score a 3 are met, **PLUS** the candidate discusses how the activities are sequenced to engage the students in high-level cognitive activity **and** how he/she provides the students with some opportunity for choice within the activities.

Part 2: All criteria to score a 3 are met, **PLUS** the candidate presents such clear benchmarks for evaluating student work that there are no gaps or ambiguity on behalf of the reader regarding the assessment plan. This criteria **also includes** considerable detail regarding needed differentiated assessments for individual students.

Domain 4: Professional Responsibility

To Score a 3:

Part 1: In his/her reflection, the candidate articulates how the artifact demonstrates his/her involvement in professional learning and how this learning can be employed to improve his/her teaching practices. The candidate's artifact aligns with this written reflection.

Part 2: In his/her reflection, the candidate discusses how the artifact demonstrates his/her high standards of honesty and integrity and how the artifact showcases his/her desire to actively and ethically serve students and school communities. The candidate's artifact aligns with this written reflection.

To Score a 4:

Part 1: All criteria to score a 3 are met, **PLUS** in his/her reflection, the candidate discusses his/her efforts to engage in ongoing professional learning.

Part 2: All criteria to score a 3 are met, **PLUS** the candidate, in his/her reflection, describes how he/she will take a positive leadership role with colleagues and work faithfully and ethically to serve ALL students and school communities.

Domain 5: Diversity

To Score a 3: In his/her reflection, the candidate articulates how the chosen artifact demonstrates his/her understanding of learner differences and individual needs and how he/she used this knowledge to create a responsive and inclusive learning environment that enabled students to meet high standards. The candidate **also** addresses any personal biases or misconceptions that he/she may have had in either the artifact itself **or** in his/her written reflection.

To Score a 4: All the criteria to score a 3 are met, **PLUS** the candidate's examination of learner differences **extends beyond** just personal and cognitive needs to an examination and responsiveness to cultural and community needs, assets, and weaknesses.

Domain 6: Technology

To Score a 3:

Part 1: In his/her reflection, the candidate discusses how the chosen artifact demonstrates the time and effort he/she spends (or will spend) with colleagues and students to improve practice, discover and share e-resources and ideas, **and** solve problems. The candidate's artifact aligns with this written reflection.

Part 2: In his/her reflection, the candidate explains how the chosen artifact showcases his/her ability to align instruction with content area standards **and** use digital tools and resources to engage active student learning. The candidate's artifact aligns with this written reflection.

To Score a 4:

Part 1: All criteria to score a 3 are met, **PLUS** the candidate, in his/her reflection, makes evident that the time and effort he/she invests to improve practice, discover and share e-resources and ideas, **and** solve problems with **BOTH** colleagues and students is not merely sufficient, but significant.

Part 2: All criteria to score a 3 are met, **PLUS** the candidate articulates how the e-resources employed maximize and deepen student learning in a way that couldn't be achieved without using such a tool.

Domain 7: Grammar and Mechanics

To score a 3: Both the ePortfolio written commentary and the collection of artifacts contain occasional errors, but they do not distract the reader or obscure meaning.

To score a 4: The writing in the ePortfolio commentary and the artifacts is free or almost free of errors.

PUBLICATION GUIDELINES

for the OHIO Journal
of Teacher Education

The following guidelines are presented for publication opportunities for OJTE (the OHIO Journal of Teacher Education.

The OHIO Journal of Teacher Education provides a forum for the exchange of information and ideas concerning the improvement of teaching and teacher education. Articles submitted should reflect this mission. Their focus should concern concepts, practices, and/or results of research that have practical dimensions, implications, or applicability for practitioners involved with teacher education. The journal is regional in scope and is sent as a benefit of membership in the Ohio Association of Teacher Education.

Manuscripts are subject to review of the Professional Journal Committee (co-editors and editor consultants). Points of view are those of the individual authors and are not necessarily those of either Association. Permission to reproduce journal articles must be requested from the editors.

MANUSCRIPT GUIDELINES

Content: Journal issues may be “thematic” or “open.” Currently, all future issues are designated “open.”

Length: Manuscripts, including all references, bibliographies, charts, figures, and tables, generally should not exceed 15 pages.

Style: For writing and editorial style, follow directions in the latest edition of the Publication Manual of the American Psychological Association. Omit the author’s name from the title page. Include an 80-100-word abstract.

Please do not use auto-formatting when preparing the manuscript!

Cover page: Include the following information on a separate sheet attached to the manuscript: title of the article; date of submission; author's name, author's terminal degree; mailing address, e-mail address, business and home phone numbers, institutional affiliation; and short biographical sketch, including background and areas of specialization.

Submission: Submissions must be word processed using Microsoft Office Word (Microsoft Excel tables are permitted). Submit the manuscript as an attachment to an e-mail to OJTE@xavier.edu

EDITORIAL PROCEDURES

Authors will be notified of the receipt of the manuscript. After an initial review by the editors, those manuscripts which meet specifications will be sent to reviewers. Notification of the status of the manuscript will take place after the deadline date for each issue. The journal editors will make minor editorial changes; major changes will be made by the author prior to publication. Manuscripts, editorial correspondence, and questions can be directed to Dr. Thomas Knestrict at OJTE@xavier.edu.

IMPORTANT DATES OF NOTE:

February 15, 2023 Closing date for acceptance of manuscripts for Spring Journal 2023

Publication date: April 2023

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Additionally, information about OCTEO (Ohio Confederation of Teacher Education Organizations), Fall and Spring OCTEO Conferences, and presentational opportunities, can be found at the following site: www.ohioteachered.org.

Our organization looks forward to your interest in OATE and OCTEO in 2023.