Innovative Approaches for Preparing Special Education Preservice Teachers

AUTHORS
Cynthia C. Massey
Jane E. Strong

Journal of Special Education Preparation
3(1), 46-55

DOI: 10.33043/JOSEP.3.1.46-55
openjournals.bsu.edu/JOSEP

ABSTRACT

For years, there has been a shortage of educators qualified to teach students with disabilities. The effect this has on student outcomes is immeasurable. To overcome this shortage, universities are searching for ways to enroll more students into their special education programs, ensure these graduates are prepared for long-term employment, and arm them with the skills necessary to best prepare their future learners. To this end, special education teacher educators seek ways to instruct most effectively during their limited time with their preservice teachers. This article discusses an instructional method to help teacher educators accomplish this goal, drawing on theoretical frameworks related to active learning techniques. Compared to the traditional method of instruction, the blended learning approach affords teachers more in-class time to actively engage preservice teachers with their course content while maintaining a rigorous learning environment. The authors explain how this model can be incorporated into synchronous and asynchronous courses and share valuable online educational resources for successful implementation. Additionally, the authors will discuss active learning strategies and video analysis tools to support preservice teachers in both the classroom and during field supervision. All of these focus on equipping preservice teachers to effectively handle the diverse and constantly evolving demands of the contemporary classroom, which may positively impact teacher retention and create a more stable teaching workforce.

KEYWORDS

Active learning strategies, blended learning, educational technology tools, preservice teachers, teacher preparation programs

The Institute of Education Science released its most recent School Pulse Panel findings, which indicated that in August of 2022, special education was the highest area of understaffed teaching positions nationwide. In fact, 65% of public schools reported a shortage in this area at the beginning of the 2022-2023 school year (Institute of Education Sciences, 2022). While this information is concerning, it is unsurprising for school administrators who fill vacancies and teacher preparation programs that recruit students (King & Weade, 2022). Teacher shortages in special education have been an issue for over 45 years (Billingsley & Bettini, 2019). This struggle continues despite efforts by the U.S. Department of Education (Mason-Williams et al., 2020), as well as state agencies and local school systems (Billingsley & Bettini, 2019). Nevertheless, special education teachers are leaving the field at an alarming rate, and college students are not entering the field quickly enough to compensate for these vacancies (Harper et al., 2022; King & Weade, 2022). Because of the decrease in enrollment, many colleges are collapsing courses and condensing programs to exit preservice teachers in as few credit hours as possible while ensuring program viability (Goode et al., 2023; Imig et al., 2016). While this change may be integral to a program's sustainability, compressing curriculum can negatively impact the

quality of teachers exiting a program (Billingsley & Bettini, 2019). Furthermore, feeling unprepared to meet the classroom demands directly impacts teachers' decision to stay in the classroom (Billingsley & Bettini, 2019). Moreover, this shortage of special education teachers directly impacts the education of students with disabilities. Educational outcomes of students with disabilities lag far behind their peers without disabilities in the area of reading and math in both grades four and eight (National Center for Education Statistics, 2022), despite their entitlement to a Free and Appropriate Public Education (FAPE) provided by the Individuals with Disabilities Education Act (IDEA; Individuals with Disabilities Education Act, 2004). IDEA (2004) mandates that students with disabilities receive an education specially designed to meet their unique needs; however, without qualified personnel to design and deliver this instruction, this is difficult to accomplish. This indicates the importance of special education teachers who possess strong pedagogical backgrounds steeped in a deep understanding of how students learn best (Brownell et al., 2020). Teacher educators who provide this strength of knowledge to their preservice teachers may produce better-prepared educators who are less likely to leave the field due to their ability to manage the unique demands and challenges of this field (Billingsley & Bettini, 2019).

Problem Statement

Teacher preparation programs must ensure special education preservice teachers exit their programs prepared to teach kindergarten through twelfth grade (K-12) students with disabilities to think critically in order to meet their individualized, appropriately ambitious goals (Endrew F. vs. Douglas County School District, 2017; McLeskey et al., 2019). These goals should be written to prepare graduates to be as independent as possible, which for many, is to enter the 21st-century workforce.

The need to prepare students for innovative industries is becoming increasingly apparent with the emergence of technological tools now supported by artificial intelligence, which will impact an unknown number of jobs these technologies may be able to automate (e.g., Chat GPT Plus, GPT-4, BARD). Therefore, K-12 special education graduates should be prepared to face a rapidly changing job market. In order for K-12 students to accomplish this, higher education courses must provide preservice teachers with theoretical and conceptual frameworks and evidence-based practices necessary to meet the high demands of the students they will serve (Lee et al., 2017; Massey et al., 2022).

Preservice teachers also need modeling and guided practice opportunities to demonstrate their ability to educate students with disabilities from diverse backgrounds using targeted, specially designed instruction. Providing preservice teachers with additional time to practice effective instructional strategies can help strengthen their skillset and potentially impact their decision to stay in the classroom (Billingsley & Bettini, 2019). Building upon this need, the next section will explore a potential solution for special education teacher educators to enhance their instructional methodologies through a more active and engaging learning environment using a blended learning instructional approach (Massey et al., 2022; Singh et al., 2021).

Potential Solution

Based on the challenge of teaching content and pedagogy while modeling a rigorous, active learning environment, teacher educators may decide that a blended learning approach would better meet their needs than the traditional teaching method (Singh et al., 2021). The blended learning approach includes a combination of in-person and online learning activities, student-centered instruction, and educational technology tools, all aimed at increasing engagement, motivation, and content mastery (Hrastinski, 2019; Singh et al., 2021). The blended learning approach also allows preservice teachers to learn in a more rigorous environment that more closely represents necessary instruction in the K-12 setting (Massey et al., 2022; Singh et al., 2021). Technology-driven tools can help teacher educators meet these needs.

Blended Learning Approach

The authors recommend the blended learning model to teach preservice special education teachers. This method allows preservice teachers to complete formative tasks and assignments for grades or synchronous discussions (See Table 1). These assignments focus on acquiring content and demonstrating an understanding of the material typically covered via lecture during the initial phase of the traditional teaching method. Completing introductory assignments before attending face-to-face or synchronous classes allows the teacher educator more instructional time for modeling, guided, and independent practice activities (Jia et al., 2020; Lee et al., 2017; Massey et al., 2022). Through the traditional teaching method, independent practice activities are often assigned as out-of-class work instead of completed under the watchful eye of the course instructor, thus 'flipping' instruction (Hamdan et al., 2013; Massey et al., 2022).

The blended learning approach helps teacher educators and their students in several ways. First, by completing preclass assignments before class, preser-

TABLE 1: Teaching Tools At a Glance

Technique	Description	Preparation Time	Resources Needed	Approximate Costs
Discussion Boards				
Perusall	Both are discussion platforms allow students to embed social annotations within documents and teacher-selected videos (Perusall), and student-created videos (Flip).	Moderate	https://www.perusall.com/	Teacher-uploaded materials are free. Textbooks are free for instructors to adopt and e-rented to students.
Flip (formerly Flipgrid)		Minimal	https://info.flip.com/	Free
Collaborative Presentation Tools				
Nearpod	Both incorporate formative assessments and active learning opportunities within presentation tools (e.g., PowerPoint).	Minimal. Once a presentation tool has been created, the time involved includes creating formative assessments.	https://nearpod.com/	Basic features are free, additional plans are available.
Pear Deck			https://www.peardeck.com/	Basic features are free, additional plans are available.
Formative Assessment Tools				
Edpuzzle	Embed questions within videos	Minimal	https://edpuzzle.com/	Basic features are free, additional plans are available.
Khan Academy	Practice exercises and instructional videos	Moderate	https://www.khanacademy.org/	Free
Kahoot!	Game-based quiz platform	Minimal	https://kahoot.com/	Basic features are free, additional plans are available.

vice teachers hear or read introductory content asynchronously in a way that works best for them (e.g., time of day, day of the week). Second, if a preservice teacher needs to review information several times to process the content, that flexibility is available (Shand & Farrelly, 2018). Effective instructors also encourage preservice teachers to reach out to them to ask questions about the content or assignment, meet with the students beforehand if extra assistance is needed, or ask students to bring questions to the synchronous learning environment for further discussion (Shand & Farrelly, 2018). This pedagogical approach increases the likelihood that preservice teachers (a) come to class with an improved understanding of the introductory material; (b) are prepared for class discussions and activities; and (c) are ready to apply skills or knowledge learned (Massey et al., 2022; Shand & Farrelly, 2018). Implementing the blended learning approach in higher education also models best practices for students with disabilities because it provides flexibility, offers opportunities for individualized learning, and includes ongoing support to master the content more effectively, all of which are high-leverage practices for students with disabilities (McLeskey et al., 2019; Shand & Farrelly, 2018). High-leverage practices in special education are evidence-based teaching strategies identified as impacting student learning outcomes (McLeskey et al., 2019). Some best practices related to high-leverage practices in instruction include promoting active student engagement, providing intensive instruction, and giving positive and constructive feedback to encourage student success (McLeskey et al., 2019). High-leverage practices can be modeled for preservice teachers through the blended learning model. The next section will discuss specific web-based tools that teacher educators can use to model high-leverage practices and measure students' performance on pre-course assignments.

Pre-Teaching Content

Teacher educators might consider three types of web-based sites to preteach course content: discussion board assignments, collaborative presentation tools, and formative assessment activ-

ities. Discussion boards are typically online platforms where students and instructors can communicate through written messages to share ideas, ask and answer questions, and collaborate on projects (Douglas et al., 2020). Collaborative presentation tools are typical course presentations (e.g., PowerPoint) adapted to include formative assessment activities embedded throughout. Formative assessment activities are quick checks for understanding to monitor students' learning and identify needs or instructional next steps. This article will discuss implementing these through engaging and motivating web-based sites, including Perusall, Flip, Pear Deck, Nearpod, Edpuzzle, Kahoot!, and Khan Academy. The first two sites, Perusall and Flip, are discussion board sites.

Discussion Boards

When used effectively, asynchronous discussion board assignments can improve preservice teachers' understanding of a course topic, impact their knowledge base, and allow them to participate in deeper discussions during synchronous class sessions (Douglas et al., 2020). One discussion board website, Perusall, accomplishes this by providing students with a social connectedness to their classmates and instructor. Perusall allows teacher educators to upload content such as presentations (e.g., PowerPoint, Google Slides, Canva), videos, articles, chapters, or a textbook to the online website, then create assignments based on those materials. Teacher educators then embed questions within the uploaded material, and preservice teachers respond similarly to current social media applications (e.g., text messages, emojis, upvoting, or hashtags). Students can also add documents and pictures while engaging in asynchronous conversations. Perusall grades students' submissions in real-time and scores are relayed immediately to the teacher educator's gradebook within Perusall and participating university's learning management system. Teacher educators set the grading parameters for each assignment. The program offers many options, such as the number of responses preservice teachers should post within each assignment and the necessary quality of the posts to earn full credit.

Another web-based discussion board website, Flip (formerly Flipgrid), can be used to pre-teach content through questions posted by the teacher educator either within their university's learning management system or directly within the Flip website via text or video. Teacher educators can create questions based on a class reading assignment, video, or other forms of content (Massey et al., 2022). Students create one to ten-minute videos responding to the teacher's prompt; the teacher educator sets the parameters for the length of students' responses. The teacher then assesses the responses to evaluate their understanding. Classmates and the instructor can review students' videos and respond with text messages or video replies. In addition to using discussion boards in a blended learning course, collaborative presentation tools are another effective way to engage students and promote collaboration when pre-teaching content.

Collaborative Presentation Tools

Repetition can become monotonous for anyone, including preservice teachers. So, besides discussion board assignments, teacher educators may choose to vary weekly pre-class assignments through other asynchronous means. Two options teacher educators might consider are Pear Deck and Nearpod. These sites build upon presentation tools such as PowerPoint, Google Slides, and Canva, then allow teachers to supplement their presentations with formative assessment measures. Some available interactive options in both programs include open-ended, true/false, or multiple-choice questions, matching and drag-and-drop activities, Venn Diagrams, drawings, and interactive maps. When Pear Deck and Nearpod are used as pre-class assignments, teacher educators can gauge preservice teachers' understanding of the material presented and adjust synchronous instruction accordingly. If the teacher educator chooses, these programs also include features that allow students to work together on collaboration boards, allowing them to share ideas and provide insight and feedback to one another. Additionally, if teacher educators choose to use either interactive presentation programs during their synchronous or face-to-face learning time, they can see real-time formative assessment data on preservice teachers' insight and understanding before moving to the next slide. Through these tools, both Pear Deck and Nearpod can help to identify areas where preservice teachers need additional support.

By utilizing collaborative presentation tools in preservice teacher training, such as the tools described above, teacher educators model best practices for students with disabilities. These sites promote inclusive participation, active engagement, and accessible materials that support multiple means of representation, expression, and engagement. These are the foundational guidelines for universal designs for learning (CAST, 2011) and are also high-leverage practices (McLeskey et al., 2019). In addition to using collaborative presentation tools, incorporating formative assessment tools within a blended learning course can provide valuable insight into preservice teachers' understanding of course material

before they attend synchronous instruction sessions.

Formative Assessment Tools

To vary pre-course assignments, teacher educators might consider using other online educational resources that ensure accountability and check for understanding. The website, Edpuzzle, allows teacher educators to upload personal or commercial videos (e.g., YouTube), then embed questions within the video. On the teacher's Edpuzzle dashboard, the instructor can see how much of a video preservice teachers watched or if they watched it multiple times. They can see which questions preservice teachers answered correctly or incorrectly. They can grade open-ended responses and see the grade Edpuzzle assigned to each student.

Kahoot! is a quiz-based website that teacher educators use to create synchronous and asynchronous assignments. Preservice teachers' responses can indicate their understanding of the assigned readings, critical concepts, or background knowledge on a topic. Teacher educators can then use those responses to tailor synchronous instruction more accurately. Teacher educators can create Kahoot! assessments with multiple-choice and open-ended questions, polls, word clouds, puzzles, and other formative assessment measures depending on the plan chosen.

Finally, Khan Academy offers a library of lessons, videos, and practice exercises that explain key concepts in subjects such as reading, language, mathematics, economics, and science. This website is helpful within methods courses to strengthen preservice teachers' content knowledge of a subject. Within Khan Academy, teacher educators can create a course and assign Khan content and activities for preservice teachers to complete. Teacher educators can see participants' progress, scores on formative or summative assessments, and time spent actively learning within the website. By incorporating discussion boards, collaborative presentations, and formative assessment tools into pre-class blended learning assignments, teacher educators lay a solid foundation of background knowledge modeled by instructional techniques that actively engage preservice teachers. The next section will explore active learning strategies teacher educators can use during synchronous class time.

Active Learning Strategies

One benefit of pre-teaching content typically covered via lecture is that teacher educators have more time during face-to-face or synchronous instruction to engage in active learning activities and apply the content learned (Hrastinski, 2019; Massey et al., 2022; Singh et al., 2021). Active learning strategies allow preservice teachers to delve deeper into content while working at a guided pace on tasks supported by the teacher educator, which helps to foster a positive, student-led classroom community (Lombardi et al., 2021). Below is a list of potential active learning strategies teacher educators can use in their synchronous classroom (see Table 2). Among them include the use of strategies such as role-play.

Role-Play

Role-play is an active learning strategy that can be used in higher education to allow preservice teachers to rehearse various concepts, instructional approaches, or strategies within a mock instructional setting (Brownell et al., 2019; Wilkinson & Potts, 2022). When roleplaying, preservice teachers experience unknown variables in an activity as other 'actors' (peers) tackle a given problem from a different mindset (Brownell et al., 2019; Wilkinson & Potts, 2022). The opportunity to engage in rehearsal dialog allows preservice teachers to practice typical special education teacher responsibilities such as teaching a concept, contributing to the Individual Education Program (IEP) team's decision-making process, experiencing how a student might feel to have decisions made for them by a committee, or understanding why a parent might react in a particular way during a parent conference or IEP meeting, all prior to conducting these meetings in the field (Wilkinson & Potts, 2022). Role-playing helps preservice teachers develop problem-solving skills, practice collaborating with others, and think critically and creatively about an issue (Wilkinson & Potts, 2022). In addition to using role-play as a student-centered learning activity, other techniques can be incorporated into special education preservice teacher education courses to promote and model active learning and encourage a deeper understanding of course material.

Student-Centered Learning Activities

Student-centered learning activities during synchronous or face-to-face class time allow preservice teachers to develop independent thinking, collaborative learning, and leadership skills by giving them tasks to perform actively (Lombardi et al., 2021; Singh et al., 2021). When implemented in teacher preparation courses, teacher educators are modeling how to encourage students to think more critically about a topic. These activities lend themselves to gaining knowledge from facilitated teacher-guided interactions and impactful peer exchanges (Wanner & Palmer, 2018). Listed in Table 2 are additional strategies that encourage preservice teachers to think independently about an issue and collaborate with class-

TABLE 2: Active Learning Tools At a Glance

Technique	Description	Preparation Time	Resources Needed
Role-Play Activities	Imitate a person or situation in the classroom setting or special education process.	Moderate	Preconceived scenarios and well-defined roles
Concept Maps	Divide students into groups and assign a reading or discussion topic. Students write key terms or snippets of information on paper or sticky notes then the whole class discusses and organizes content into a flowchart.	Minimal	Paper and writing utensils, possibly sticky notes
Fixed/Growth Mindset Paired Discussions	Present students with an issue. Ask one person in the pair how one might react if (s)he uses a fixed mindset and the other approaches the issue with a growth mindset.	Minimal	Prepared conversation content and prior knowledge of Fixed and Growth Mindsets
Gallery Walks	Post statements around the room. Give students a predetermined number of dots. Ask students to place a dot on the statement(s) they agree with the most, then discuss.	Minimal	Poster board paper, easel pad paper, or images/ content placed around the room.
Infographics	Representation of information presented in a flowchart-type visual design.	Minimal	Sites such as Canva, Venngage, etc.
Jigsaw Activities	Divide students into groups. Each group has a different topic and becomes the "expert" on this. Re-mix groups with one "expert" on each topic in the new group and share the content learned.	Moderate	Copies of assigned reading, paper, and pen. When homogeneous groups remix, each should complete a task to demonstrate an understanding of how jigsaw pieces fit together (e.g., picture, graphic organizer, etc.).
Poster Rotations	Write content questions on poster paper. Divide students into groups. Have groups rotate through each poster adding content to previous responses. Review in the whole group setting.	Minimal	Poster Board paper or large easel pad paper
Sticky Note Discussions	Divide students into groups. Assign a reading. Ask students to take notes on the content they want to discuss. Share in small groups.	Minimal	An assigned reading and Sticky Notes.
Think-Pair-Repair Activities	Instructor poses a question and asks students to answer it independently. Then pair students with a partner to develop one cohesive response.	Minimal	A question to use for conversation
Socratic Circles	Conversations in which students work together to construct meaning through questions posed. The questions are intended to deepen students' insight. The inner circle focuses on the question while the outer circle listens until the inner circle passes the text to the outer circle for further discussion.	Minimal	Passages of text and enough classroom space for an inner and outer circle
Talking Sticks	Encourage students to wait for their turn to talk. Only the person holding the stick can talk. This allows each person to have a voice in a discussion.	Minimal	Sticks can be popsicle sticks or are Talking Sticks available for purchase online.

mates to better understand a topic. These strategies include concept maps, fixed/growth mindset paired discussions, gallery walks, infographics, jigsaw activities, poster rotations, sticky note discussions, and think-pair-repair activities.

Two final active learning strategies in Table 2 are Socratic Circles and Talking Sticks. These techniques require pre-service teachers to think independently as well as internalize, listen, and learn

from their peers as they build upon their classmates' contributions within a conversation. The added benefits of these final strategies are that they help ensure that all preservice teachers within the class are given a voice during a discussion.

As indicated above, the blended learning model offers a powerful solution to the limitations of the traditional teaching method. This instructional method enables educators to create a more active and effective learning environment that impacts comprehension and models means by which aspiring special education teachers can design more innovative educational opportunities for their K-12 students, a crucial requirement for 21st-century learners. Another strategy that helps prepare special education preservice teachers for the K-12 classroom is incorporating video analysis in teacher preparation programs. Video analysis is an educational technology tool that offers a range of benefits for teacher supervision and role-play activities.

Video Analysis

Various forms of video recording have been used as effective technology tools in preservice teacher supervision since the 1970s and are considered a promising practice (Nagro & Cornelius, 2013). Video analysis assists with teacher candidates' demonstration of pedagogy, self-reflection, and supervision of field experiences (Ardley & Hallare, 2020; Nagro, 2022; Nagro & Cornelius, 2013; Wilkinson & Potts, 2022).

Video Analysis for Supervision

While video observations occurred before 2020, these were often relied on in teacher preparation program supervision courses during the COVID-19 pandemic. Out of an abundance of caution, university supervisors could not directly observe preservice teachers in their field placements. Many continue to use video observation tools today due to the convenience and learning opportunities. Although tools and features vary, video software applications provide recorded opportunities for preservice teachers to demonstrate instruction and allow supervisors to provide feedback, including successes and needs for improvement (see Table 3). One program, GoReact, can be an effective tool and method of video analysis (Ardley & Hallare, 2020; Hager, 2020).

GoReact is a video-annotated software tool that allows course supervisors to assess preservice teachers using data-driven, video-recorded activities (Ardley & Hallare, 2020). This tool facilitates analysis of preservice teachers' use of targeted teaching skills. These course supervisors can provide timely feedback directly within the recording with a time stamp that easily pauses for discussion. Feedback can be in various formats, including typed annotations, audio or video-recorded responses, links to PDF documents, YouTube videos, or uploaded images. GoReact is a relatively simple tool with a built-in feature that allows supervisors to leave feedback using pre-programmed comment markers (Ardley & Hallare, 2020). These comment markers are frequently used replies that can be inserted into feedback given to preservice teachers along with anecdotal comments. Preservice teachers can easily access this feedback, respond through GoReact, and self-reflect upon their performance. Furthermore, preservice teachers may include a copy of their teaching demonstration in a professional portfolio so prospective principals could review their instruction for employment consideration.

During follow-up meetings with preservice teachers, the instructor may highlight a segment of a preservice teacher's video recording demonstrating a particular effective instructional strategy. The instructor can pause the video at specific points to allow the preservice teacher to narrate or comment, discuss insight into its effectiveness, and how it might be modified to meet various students' needs. As the video plays, the instructor may ask questions and engage the preservice teacher in discussing using a high-leverage practice, evidence-based strategy, or universal design for learning technique and its impact on student learning (Grossman, 2018). Also, with prior permission, a teacher educator can use a preservice teacher's instruction clip during synchronous class time to demonstrate strategies and facilitate conversations. These whole group conversations allow for collaborative learning and peer feedback, as preservice teachers can learn from each other's experiences and perspectives.

Capturing Observations And Collaboratively sHaring Educational Data (COACHED) is a similar video analysis software package developed by researchers at the University of Virginia. Through this program, researchers have demonstrated the timely delivery of targeted feedback in evidence-based practices (Kunemund et al., 2022). Additional tools teacher educators might consider include using a 360° camera, bug-in-ear coaching, and Swivl. Each allows instructors to engage in data-rich introspective exercises that can benefit preservice teachers (Nagro, 2022). Regardless of the tool chosen, university supervisors can use video recordings to create supervision-related learning opportunities, including self-analysis and peer reflection, within a recorded lesson. Cooperating teachers may also find video-recorded lessons helpful when mentoring preservice teachers. The second author received positive preservice teachers' anecdotal feedback

TABLE 3: Video Supervision Tools at a Glance

Technique	Description	Preparation Time	Resources Needed	Approximate Costs
GoReact	Teacher Candidate, supervisor and peers can provide feedback on a recorded video lesson.	Minimal initial training to use; Moderate initial time to create case studies and scripts for role-play.	https://get.goreact.com/; Case Study and role-play materials, self-reflection rubric	**Begins at approximately $62 per user/ per year**
COACHED	Supervisor provides data-rich observation feedback.	Moderate time to become proficient with coding video.	https://www.coached.education.virginia.edu/. Self-reflection rubric	**Free**
Additional Video Supervision Tools to Consider				
360° Camera	This camera allows the user to capture videos in a 360° spherical format around the entire classroom or space.		Multiple models available	**Prices vary based on design**
Distance Bug-in-Ear Coaching	Supervisor can provide immediate coaching from a remote location through a wireless earpiece.		Bluetooth headset and webcam (not a commercial product)	**Prices vary based on design**
Swivl	Teacher places an iPad, camera, or smartphone on a Swivl mount and uses the remote-control marker to track and record the moving person.		https://www.swivl.com/	**Prices vary based on design**

on using video analysis in supervision. Preservice teachers reported that video recordings were less stressful because they were teaching to a camera instead of directly to a course supervisor. In addition to video analysis for supervision, video recordings can be used in role-play activities to enhance the learning experience of preservice teachers.

Video Analysis in Role-Play Activities

Video recordings can extend preservice teachers' learning during such activities as mock parent-teacher or student conference meetings (Nagro & Cornelius, 2013). In these situations, preservice teachers role-play various attendees within the meeting, and the activity is video recorded so preservice teachers can revisit and reflect on the experience. Specifically, mock IEP meetings can be recorded to allow preservice teachers to reflect upon their rehearsal of the skills needed to manage integral components. These recordings might include any portion of an IEP meeting, such as the collaboration and communication discussions between and among the attendees, the delivery of assessments and evaluations, the creation of IEP goals, the determination of appropriate accommodations or modifications, the incorporation of specially designed instruction, services, and supports, or advocation for the inclusion or exclusion of requested services. By video recording the event, preservice teachers can self-reflect upon their performance more effectively than relying on their recollection or taking the words of others present (Nagro, 2022; Nagro & Cornelius, 2013). This reflection allows teacher candidates to identify their strengths and areas for growth (Nagro, 2022; Wilkinson & Potts, 2022). Preservice teachers can assess their ability to communicate effectively with students, parents, and other committee members. Video recordings also allow

ABOUT THE AUTHORS

Cynthia C. Massey, Ph.D.

Dr. Cynthia Massey is an Assistant Professor of Elementary and Special Education at Georgia Southern University. Her research interests focus on classroom and instructional technology and special education teacher preparation. The focus of her dissertation was on the impact of instructional technology in reading encompassing the tenets of Universal Design for Learning, Differentiated Instruction and computerized graphic organizers.

Jane E Strong, Ph.D.

Dr. Jane E Strong is an Assistant Professor of Special Education at Middle Georgia State University. She is licensed as an elementary general education teacher through 4th grade and special education teacher in K-12, teaching students with emotional and intellectual disabilities through the state of Virginia. Her research interests center around special education teacher preparation and special education administration.

preservice teachers to increase their awareness of nonverbal cues that might not have been noticed during the activity. Additionally, preservice teachers can watch the recording from others' perspectives which can help them recognize the diverse perspectives of committee members, such as recognizing potential barriers to effective communication as IEP meetings are often filled with formal education terminology required by federal law (e.g., IDEA, 2004). This experience can help preservice teachers understand how information may be received from people with various perspectives and help develop empathy for others in attendance. Video-recorded opportunities allow preservice teachers to contemplate and improve valuable communication skills they will need later when engaging with students, parents, and other professionals, which can also help lessen their anxiety and boost confidence when facing these job responsibilities. The second author experienced success with group projects in which preservice teachers assume an assigned role at an IEP meeting and record the skit within GoReact for peer feedback. Anecdotally, preservice teachers reported that the discussion during the debrief of this activity enhanced their understanding of legal requirements, family cultural impact, conflict resolution, and ways to respond to unexpected topics that IEP team members face in meetings.

In these meetings, special education teachers have to communicate technical information about students and their learning and are also expected to simultaneously manage the group dynamic, which can be highly emotional for parents, teachers, and administrators. The video role-playing activity enables preservice teachers to apply and demonstrate their culmination of knowledge about the legal requirements of an IEP meeting and the IEP document with the technical aspect of using tools such as IEP software or forms. These role-plays highlight the dilemmas that may derive during IEP meetings if the content knowledge, emotions, technical steps, and technical aspects of complicated meetings are not successfully managed. Navigating these dilemmas in the lower-stakes atmosphere of class activities, whether face-to-face video recording or in a virtual environment, assists teacher candidates' preparation, self-efficacy, and career readiness.

CONCLUSION

In order to provide preservice special education teachers with the tools to best educate their future K-12 students with disabilities, teacher educators must go beyond traditional methods of instruction. Through the blended learning approach, course instructors can introduce material typically taught during teacher-led instruction by using technology-based assignments embedded with rigorous accountability measures. Teachers have additional time to incorporate active learning techniques by introducing content before synchronous class time. These techniques serve many purposes, including creating a student-centered classroom, presenting information in multiple ways to benefit students who learn differently, and helping preservice teachers develop critical thinking and problem-solving skills. These activities also allow teacher educators to model the implementation of active learning techniques that preservice special education teachers will need to master in order to be successful educators. This is critical as these future educators must work diligently to motivate and impact their K-12 student's performance. Likewise, these strategies help to prepare preservice teachers for the

diverse and ever-changing demands of the modern classroom. As the field of education continues to evolve, teacher preparation programs must continue to explore new and innovative approaches for training the next generation of educators. Most importantly, when special education teachers feel better prepared to meet their job expectations, they may choose to stay in the classroom, directly impacting teacher retention rates.

REFERENCES

Ardley, J., & Hallare M. (2020). The feedback cycle: Lessons learned with video annotation software during student teaching. *Journal of Educational Technology Systems, 49*(1), 94-112. https://doi.org/10.1177/0047239520912343

Billingsley, B., & Bettini, E. (2019). Special education teacher attrition and retention: A review of the literature. *Review of Educational Research, 89*(5), 697-744. https://doi.org/10.3102/0034654319862495

Brownell, M. T., Benedict, A. E., Leko, M. M., Peyton, D., Pua, D., & Richards-Tutor, C. (2019). A continuum of pedagogies for preparing teachers to use high-leverage practices. *Remedial and Special Education, 40*(6), 338-355.https://doi.org/10.1177/0741932518824990

Brownell, M. T., Jones, N. D., Sohn, H., & Stark, K. (2020). Improving teaching quality for students with disabilities: Establishing a warrant for teacher education practice. *Teacher Education and Special Education, 43*(1), 28–44. https://doi.org/10.1177/0888406419880351

CAST (2011). Universal design for learning guidelines version 2.0 [graphic organizer]. www.udlcenter.org

Douglas, T., James, A., Earwaker, L., Mather, C., & Murray, S. (2020). Online discussion boards: Improving practice and student engagement by harnessing facilitator perceptions. *Journal of University Teaching & Learning Practice, 17*(3), 1–14. https://doi.org/10.53761/1.17.3.7

Endrew F. versus Douglas County School District (2017). 137 S.Ct. 988, 1001. Supreme Court of the United States. https://www.supremecourt.gov/opinions/16pdf/15-827_0pm1.pdf

Goode, E., Roche, T., Wilson, E., & McKenzie, J. W. (2023). Implications of immersive scheduling for student achievement and feedback. *Studies in Higher Education*, 1-14. https://doi.org/10.1080/03075079.2023.2184472

Grossman, P. (2018). *Teaching core practices in teacher education*. Harvard Education Press.

Hager, K. D., (2020). Integrating technology to improve teacher preparation. *College Trends, 68*(2), 71-78. https://doi.org/10.1080/87567555.2020.1723475

Hamdan, N., McKnight, P., McKnight, K., & Arfstrom, K. (2013). *The flipped learning model: A white paper based on the literature review titled a review of flipped learning* [White paper]. Flipped Learning Network. https://flippedlearning.org/wp-content/uploads/2016/07/WhitePaper_FlippedLearning.pdf

Harper, J., Gilmour, A., F., & Galea, N. (2022). Trends in the potential supply of new special educators. *Exceptionality*. https://doi.org/10.1080/09362835.2022.2134867

Hrastinski, S. (2019). What do we mean by blended learning? *TechTrends: Linking Research & Practice to Improve Learning, 63,* 564-569. https://doi.org/10.1007/s11528-019-00375-5 Imig, D., Wiseman, D. L., Wiseman, A., & Imig, S. R. (2016). What is high quality teacher education? In: Chi-kin Lee, J. Day, C. (Eds). *Quality and Change in Techer Education. Professional Learning and Development in Schools and Higher Education*, 77-94. Springer. https://doi.org/10.1007/978-3-319-24139-5_5

Individuals with Disabilities Education Act, 20 U.S.C. § 1400 (2004). Jia, C., Hew, K. F., Bai, S., & Huang, W. (2020). Adaptation of a conventional flipped course to an online flipped format during the COVID-19 pandemic: Student learning performance and engagement. *Journal of Research on Technology in Education, 54*(2), 281-301. https://doi.org/10.1080/15391523.2020.1847220

King, J. E., & Weade, J. (2022). *Colleges of Education: A National Portrait, Second Edition*. American Association of Colleges for Teacher Education. https://aacte.org/2022/03/aactes-national-portrait-sounds-the-alarm-on-declining-interest-in-education-careers/.

Kunemund, R. L., Kennedy, M. J., Griendling, L. M., VanUitert, V. J., & McDonald, S. D. (2022). A multimedia option for delivering feedback and professional development to teachers. *Journal of Special Education Technology, 37*(2), 336-346. https://doi.org/10.1177/01626434211004121

Lee, J., Lim, C., & Kim, H. (2017). Development of an instructional design model for flipped learning in higher education. *Education Technology Research & Development, 65,* 427-453. https://doi.org/10.1007/s11423-016-9502-1

Lombardi, D., Shipley, T. F., & Astronomy Team, Biology Team, Chemistry Team, Engineering Team, Geography Team, Geoscience Team, and Physics Team (2021). The curious construct of active learning. *Psychological Science in the Public Interest*, *22*(1), 8-43. https://doi.org/10.1177/1529100620973974

Mason-Williams, L., Bettini, E., Peyton, D., Harvey, A., Rosenberg, M., & Sindelar, P. T. (2020). Rethinking shortages in special education: Making good on the promise of an equal opportunity for students with disabilities. *Teacher Education and Special Education, 43*(1), 45-62. https://doi.org/10.1177/0888406419880352

Massey, C. C., Dogan, S., Muhammad, E., Head, C. N., Hogan, E., & Kim, J. (2022). Analyzing the impact of a flipped instruction model in educator prep courses. *International Journal for the Scholarship of Teaching and Learning, 16*(2), 1-10. https://doi.org/10.20429/ijsotl.2022.160213

McLeskey, J., Maheady, L., Billingsley, B., Brownell, M. T., & Lewis, T. J. (Eds.). (2019). *High leverage practices for inclusive classrooms.* Routledge.

Nagro, S. A. (2022). Three phases of video-based reflection activities to transition teacher candidates from understanding to examining practice. *Journal of Special Education Preparation, 2*(1), 28-37. https://doi.org/10.33043/JOSEP.2.1.28-37

Nagro, S. A., & Cornelius, K. E. (2013). Evaluating the evidence base of video analysis: A special education teacher development tool. *Teacher Education and Special Education, 36*(4), 312-329. https://doi.org/10.1177/0888406413501090

National Center for Education Statistics (2022). *NAEP Report Card.* U.S. Department of Education, Institute of Education Sciences. [Retrieved March 23, 2023], from https://www.nationsreportcard.gov/

Institute of Education Sciences(August 2022). *School Pulse Panel Report.* U.S Department of Education. [Retrieved December 19, 2022], from https://ies.ed.gov/school-survey/spp/

Shand, K., & Farrelly, S. G. (2018). The art of blending: Benefits and challenges of a blended course for preservice teachers. *Journal of Educators Online, 15*(1), 1-15. https://files.eric.ed.gov/fulltext/EJ1168949.pdf

Singh, J., Steele, K, & Singh, L. (2021). Combining the best of online and face-to-face learning: Hybrid and blended learning approach for COVID-19, post-vaccine, & post-pandemic world. *Journal of Educational Technology Systems, 50,(2),*140-179.https://doi.org/10.1177/00472395211047865

Wanner, T., & Palmer, E. (2018). Formative self- and peer assessment for improved student learning: The crucial factors of design, teacher participation and feedback. *Assessment & Evaluation in Higher Education, 43*(7), 1012-1047. https://doi.org/10.1080/02602938.2018.1427698

Wilkinson, C., & Potts, E. (2022). Role play activities in small programs: What, why, where, and how? *Journal of Special Education Preparation, 2*(2), 6-17. https://doi.org/10.33043/JOSEP.2.2.6-17