

# CIDDL Research and Practice Brief 15: Video-Based Reflections in Teacher Preparation



**AUTHOR**  
Ashley Y. Grays

**PUBLISHED**  
June 30, 2022



This work is licensed under [a Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

## Suggested Citation:

Grays, A. & the CIDDL Team. (2022). Video-based reflections in teacher preparation. The Center for Innovation, Design, and Digital Learning. <https://ciddl.org/research-and-practice-brief15-video-based-reflections-in-teacher-preparation/>

# OUR COLLECTIVE WHY 99

Dear stakeholder,

Thank you for engaging with the Center for Innovation, Design, and Digital Learning ([CIDDL](#)). The work that you are about to access is supported with funding from the Office of Special Education Programs at the U.S. Department of Education.

The CIDDL Center is striving to impact the use of educational technologies into preparation programs, including special education, early intervention, and related services personnel preparation and leadership personnel preparation programs that prepare professionals serving students with disabilities.

## CIDDL Research and Practice Briefs

[CIDDL Research and Practice Briefs](#) is a series of reports on research and practices regarding the innovative use of technology in special education, early childhood, related services personnel preparation and leadership personnel preparation programs as well as K-12 educational settings. For each brief, an expert or practitioner in the field is invited to discuss their research and practices. In addition, experts and practitioners will share their insights into opportunities and challenges about applying their research and practices to professional preparation programs.

Click [here](#) to become part of our community

# Topic: Video-Based Reflections in Teacher Preparation

## The problem highlighted in this brief

Using reflections in teacher preparation programs is an evidence-based practice (Council for Exceptional Children [CEC], 2020). However, the approach to self-reflection determines its level of effectiveness. According to previous research, reflections based on memory or data collected are not as effective as using video-based reflections (Borko et al., 2008; Robinson & Kelley, 2007). Thus, it is important to increase the quality of reflections (e.g., through the use of video) in teacher preparation.

## Why does this matter to teacher preparation?

Teacher shortages are occurring throughout the country and especially in special education (U.S. Department of Education, 2022). One method to address shortages is to improve teacher preparation design and capacity (Peyton et al., 2020). Particularly, it is vital that preparation programs are producing individuals who are profession ready and who can implement research-based practices with fidelity (Nagro et al., 2020). The use of video-based reflections provides an opportunity for teachers to reflect on their learning and make self-driven improvements to their teaching practices (Moore, 2003). Video-based reflections are a low-cost, potentially high-impact solution to the long-term success and retention of teachers in special education.

## Guest Expert: Dr. Sarah Nagro

[Dr. Sarah Nagro](#) is an Associate Professor at [George Mason University](#). Her primary area of research focuses on determining the best practices for teachers in special education. In particular, she examines effective practices to prepare profession-ready teachers to work in inclusive classrooms using experiential learning with an emphasis on reflective practices through technology-enhanced and video-based activities.

## What Will You Learn from This Brief?

This brief first introduces practice and research context about reflection in teacher preparation. Within such contexts, Dr. Nagro shares the benefits of using video as a cost-effective tool to supplement reflective activities in teacher preparation. Dr. Nagro also shares tips and resources to implement video-based reflection into current teacher preparation programs.

## Practice and Research Context

### Reflection in Teacher Preparation

Special educators face many challenges when they enter the profession such as pipeline shortages and large caseloads (Leko et al., 2015; Rock et al, 2016). Because of the additional complexities of the role, it is essential that those entering the profession are equipped with tools to assess their own instruction.

Having teachers reflect on their practices can promote the generalization of lessons learned as well as build their self-analytical

skills (Nagro et al., 2020). Through reflections, pre-service and in-service teachers are able to identify the strengths and weaknesses of instructional practices. Additionally, reflections allow teachers to continuously increase the fidelity of implementing evidence-based practices. While reflection activities are common to teacher preparation, teachers have to “learn how to notice” elements of teaching that support the link between theory and practice (van Es & Sherin, 2002).

### **Video Analysis**

When “reflecting,” what teachers are usually doing is recalling events as opposed to critically analyzing the teaching decisions (Calandra et al., 2008; Kalk et al., 2014). Because of this, it is vital that teacher preparation programs teach pre-service teachers how to have meaningful reflections. One strategy for doing this is to begin by having them analyze the practices of other teachers (Nagro et al., 2017). Once pre-service teachers have demonstrated a mastery of analyzing specific teaching practices, they can begin to analyze their own instruction. Moreover, video-based reflections empower teachers to self-analyze and reflect even after they enter the profession.

Video analysis can support teacher reflections by providing a model for reflective activities (Nagro et al., 2017). The use of video supports reflection as video recordings of the teacher delivering a lesson can be analyzed in multiple ways. One short clip can be examined for various standards or evidence-based practices that can inform future decision-making.

The following are key insights shared by Dr. Nagro about this research during our interview with her. The interview focused on

multiple questions around video reflections in teacher preparation as well as recommendations for teacher educators to incorporate these ideas.

## Key Insights

*Q1: What are the issues that you are trying to address through your research and work with video-based reflections?*

Dr. Nagro: “We know that a lot of teacher candidates report feeling underprepared when they leave their preparation. So the research that I'm doing is really about how we help them to see the things that they're doing in their preparation program as useful tools they can take with them into the classroom to be able to use those skills.”

Having well-prepared teachers is vital to the success of the students in their classrooms. Yet, research shows that many teachers are overwhelmed by the transition to the classroom and lack self-efficacy for implementing best practices (Dicke et al., 2015). Researchers across the country are exploring solutions to seek and retain teachers. For example, CEC and CEEDAR partnered up to produce a [series](#) that focuses specifically on the teacher shortage.

*Q2: What opportunities do you think video-based reflections may have for improving higher personnel and related service programs that prepare professionals who serve students with disabilities?*

Dr. Nagro: “[T]hat each student presents in a unique way with unique challenges has a different set of background experiences [and] different cultural experiences ...so having a skill of

something like video-based reflection or video-based analysis, [allows you to] customize the way that you're thinking about your own practice as a teacher.”

Using evidence-based practices to teach students with diverse needs is complex. Students with the same diagnosis can present differently and have different backgrounds; thus, teachers must be prepared to make decisions in the moment that will best address the needs of the unique learner. Video-based analysis allows the instructor to make those decisions and later analyze and judge the decisions made. This allows for the teacher to make a more informed choice when presented with a similar situation in the future.

*Q3: Why is having the teacher involved in assessing their own instruction so important?*

Dr. Nagro: “We want to move away from that compliance mindset and more towards a learner mindset where the focus is on the engagement in the activity: How is this going to help me to improve my practice for the next time I’m in front of students?”

While reflective activities are common in teacher preparation, not all reflection is created equal. Teachers have to be able to build the skill of reflection using intentional practices. Those teachers who have more reflective ability are able to implement real improvements when teaching in the classroom (Etschgeudt et al., 2012). Using video aids in these practices because video analysis has led to an increase in teacher motivation for critical analysis (Seidel et al., 2011).

*Q4: Can you provide specific examples of how a teacher preparation program would implement video-based reflections in their current practice?*

Dr. Nagro: “Being able to set up that camera with an inexpensive tripod. I usually get them on Amazon those little \$7 tabletop tripods [for] setting your camera up. You can add a fisheye lens if you want to capture more of the classroom...[and] you can add on microphones if you want to, but ... it's not always about production value as long as you're able to hear what the teacher is saying.”

Video Analysis requires the teacher candidate to observe and assess their own performance as opposed to that of others (Nagro et al., 2017). The use of materials readily accessible and/or reasonably priced allows for the benefits of video analysis to be used in teacher preparation programs with fewer barriers than other more expensive options for increasing teacher performance.

## Resources

In the interview, Dr. Nagro shared that she uses reflection matrices which can be modified to suit different needs. These matrices along with lesson plan templates and other useful tools can be found on her [website](#). Dr. Nagro is also working with Dr. Michael Kennedy and Dr. Shanna Hirsch on [Project FRaME](#) which combines the work of the PIs to create a comprehensive coaching package.

## Link to Video

This Research and Practice Brief can be viewed on video online at [tinyurl.com/CIDDLRPBInterview15](https://tinyurl.com/CIDDLRPBInterview15)

## References

- Borko, H., Jacobs, J., Eiteljorg, E., & Pittman, M. (2008). Video as a tool for fostering productive discussions in mathematics professional development. *Teaching and Teacher Education*, 24, 417-436.
- Calandra, B., Gurvitch, R., & Lund, J. (2008). An exploratory study of digital video editing as a tool for teacher preparation. *Technology and Teacher Education*, 16(2), 137-153.
- Council for Exceptional Children. (2020). Initial preparation standards for special educators. Retrieved from <https://exceptionalchildren.org/standards/initial-practice-based-professional-preparation-standards-special-educators>
- Dicke, T., Elling, J., Schmeck, A., & Leutner, D. (2015). Reducing reality shock: The effects of classroom management skills training on beginning teachers. *Teaching and Teacher Education*, 48, 1-12. doi:10.1016/j.tate.2015.01.013
- Kalk, K., Luik, P., Taimalu, M., & Täht, K. (2014). Validity and reliability of two instruments to measure reflection: A confirmatory study. *Journal of the Humanities & Social Sciences*, 18(2), 121-134. doi:10.3176/tr.2014.2.02
- Leko, M. M., Brownell, M. P., Sindelar, P. T., & Kiely, M. T. (2015). Envisioning the future of special education personnel preparation in a standards-based era. *Exceptional Children*, 82, 25-43. doi:10.1177/0014402915598782

- Nagro, S. A., Hirsch, S. E., & Kennedy, M. J. (2020). A Self-Led Approach to Improving Classroom Management Practices Using Video Analysis. *TEACHING Exceptional Children*, 53(1), 24–32. <https://doi.org/10.1177/0040059920914329>
- Nagro, S. A., deBettencourt, L. U., Rosenberg, M. S., Carran, D. T., & Weiss, M. P. (2017). The Effects of Guided Video Analysis on Teacher Candidates' Reflective Ability and Instructional Skills. *Teacher Education and Special Education*, 40(1), 7–25. ERIC.
- Nagro, S. A. (2020). Reflecting on Others before Reflecting on Self: Using Video Evidence to Guide Teacher Candidates' Reflective Practices. *Journal of Teacher Education*, 71(4), 420–433. ERIC.
- Peyton, D. J., Acosta, K., Harvey, A., Pua, D. J., Sindelar, P. T., Mason-Williams, L., ... & Crews, E. (2021). Special education teacher shortage: Differences between high and low shortage states. *Teacher Education and Special Education*, 44(1), 5-23. <https://doi.org/10.1177/0888406420906618>
- Robinson, L., & Kelley, B. (2007). Developing reflective thought in preservice educators: Utilizing role-plays and digital video. *Journal of Special Education Technology*, 22(2), 31-43.
- Rock, M. L., Spooner, F., Nagro, S., Vasquez, T., Bausch, M., Dunn, C., . . . Jones, J. L. (2016). 21st century change drivers: Considerations for constructing transformative models of special education teacher development. *Teacher Education and Special Education*, 39, 98-120. doi:10.1177/0888406416640634
- Seidel, T., Stürmer, K., Blomberg, G., Kobarg, M., & Schwindt, K. (2011). Teachers learning from analysis of videotaped classroom situations: Does it make a difference whether teachers observe their own teaching or that of others? *Teaching and Teacher Education*, 27, 259-267.

Solving the Teacher Shortage: How to Attract and Retain Excellent Educators. (2022). Retrieved from <https://learningpolicyinstitute.org/product/solving-teacher-shortage-brief>

United States Department of Education. (2022). *Teacher Shortage Areas*. <https://tsa.ed.gov/#/home/>

## Transcription of Interview

Transcription of the interview can be found at [tinyurl.com/CIDDLRPBInterviewTranscript15](https://tinyurl.com/CIDDLRPBInterviewTranscript15)

## For More Information

More CIDDL Research and Practice Briefs can be found at [the CIDDL website](#). Please visit [our website](#) for more resources and sign up for the updates from CIDDL.

Center for Innovation, Design, and Digital Learning  
University of Kansas  
Joseph R. Pearson Hall  
1122 West Campus Rd.  
Lawrence, KS 66045-3101  
[info@ciddl.org](mailto:info@ciddl.org)