# Three Phases of Video-Based Reflection Activities to Transition Teacher Candidates from Understanding to Examining Practice

**AUTHORS**
*Sarah A. Nagro*

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## ABSTRACT

Video-based reflection activities, common to teacher preparation, serve as a bridge between theory and practice and support teacher candidate professional growth overall. Without the necessary guidance on how to reflect, many teacher candidates lack the ability to critically review, analyze, and evaluate their teaching to learn from and apply new insights to future teaching situations. Candidates likely need to develop foundational skills prior to engaging in complex, video-based reflection activities. The purpose of this article is to describe a three-phase sequential approach to developing teacher candidates as reflective practitioners. Specifically, the three phases begin with foundational skills of understanding practice, then shift to approaches for connecting practice, and finally transition to sophisticated professional growth opportunities through examining practice. Details regarding logistics and parameters for exemplar video-based observation activities as well as steps for guiding reflective practice at each phase are discussed.

## KEYWORDS

**Field experience, reflective practice, simulation, video analysis, video-based reflection activities**

## Why is Reflective Practice Important?

Reflective ability, within the context of teaching, is essential to improving practice and optimizing performance. Reflective practitioners are professionals who consider their actions and perceptions with intentionally to inform their professional decision making and more broadly, their professional identity. This ability to engage in critical reflection requires a clearly defined approach for self-confrontation and self-evaluation where purposeful examination of one's own thoughts, perspectives, biases, and actions takes place (Slade et al., 2019). Dewey (1933), a foundational reflection theorist, posited experiences alone do not necessarily result in new knowledge since he believed it was only through reflection that meaning-making and planning for the future based on past insights could occur. During meaningful reflection, a person likely engages in perspective taking, confronts existing beliefs, questions causation, and compares expectations to reality.

The ability to critically reflect goes beyond recalling a lesson or sharing feelings about perceived student learning. Reflective practitioners (a) demonstrate an awareness of actions and events, (b) justify their decision-making process based on one or more perspectives or factors, and (c) draw conclusions about the need for similar or alternative actions in the future based on their desired outcome (Beck et al., 2002; Nagro et al., 2017). Through reflective practice, teacher candidates can make sense of events, log experiences, and, when similar events happen, teacher candidates can recognize the experience and know what to do. Reflection activities linked to field experiences provide teacher candidates with robust opportunities to draw connections between knowledge and application through self-confrontation.

Further, teacher candidates' reflective practices are more likely to translate to professional routines upon entering the workforce if initiated during teacher preparation field experiences (Etscheidt et al., 2012).

Given the importance of reflection, it is not surprising that reflective practice is a shared expectation of the teaching profession. In fact, both the Council of Chief State School Officers (CCSSO), through its Interstate Teacher Assessment and Support Consortium (InTASC), and the Council for Exceptional Children (CEC) include professional teaching standards that focus on lifelong learning through reflection on one's own teaching practices (CCSSO, 2021; CEC, 2020). For example, the *InTASC Model Core Teaching Standards and Learning Progressions for Teachers* (CCSSO, 2021) state teachers should reflect to (a) examine their practice to evaluate how well it addresses individual learner needs; (b) share their practice with others to obtain feedback on better meeting learner needs; and (c) understand their practice to better make adjustments. Similarly, CEC's (2015) *What Every Special Educator Must Know: Ethics, Standards and Guidelines* posit that reflection is important so that special educators become aware of how their attitudes, behaviors, and approaches to communication impact their professional practice.

## What are the Challenges of Reflective Practice?

Despite the clear reasons for including reflection activities in teacher preparation, teacher candidates often default to superficial reflective statements that focus on summarizing rather than examining practice (Kalk et al., 2014; Nagro et al., 2017). Even with repeated exposure to reflective practice, candidates tend to focus on simplisitc descriptions of classroom events rather than critically considering the reasons for their decision-making or success of their instructional practice (deBettencourt & Nagro, 2019). In multiple examples, where candidates were asked to write self-reflections throughout a field experience, the candidates focused on recalling technical aspects of the lesson such as pacing, scheduling, models of co-teaching, or types of activities (e.g., Brantley et al., 2008; Calandra et al., 2008; deBettencourt & Nagro, 2019). Similarly, providing candidates with probing questions or topical suggestions without including a deliberate approach for inquiry has resulted in a misunderstanding of the role of reflective practice as an awareness activity and not a transformational activity (Kalk et al., 2014; Khan, 2017).

Without the necessary tools and structured guidance on how to reflect, teacher candidates have not demonstrated improvements in reflective practice (Kalk et al., 2014; Nagro et al., 2017). Simply requiring teacher candidates to reflect frequently throughout one field experience or even throughout an entire preparation program without careful consideration of how to develop reflective practice, is unlikely to result in meaningful self-confrontation because constructing reflective ability does not happen spontaneously (Mulryan-Kyne, 2021). Teacher candidates have to be taught how to reflect similar to needing to learn how to plan a lesson or design a behavior system. Teacher candidates first need to learn what reflection is, why it matters, and how to engage in reflective practice before they develop the ability to reflect critically and with purpose. Fortunately, there are research-supported methods for guiding teacher candidates towards improved reflective practice.

## What Promising Activities Promote Reflective Practice?

One promising activity for promoting reflective practice is video analysis. Video analysis is one of many video-based reflection activities, but is uniquely defined as reflecting on video evidence of one's own instruction from authentic teaching experiences. Because teacher candidates have video evidence to support their reflective practice, they are not overly dependent on recollection and feelings. Reflecting using video evidence has been shown as a more effective method for developing reflective practice when compared to traditional, memory-based forms of reflection activities (Seidel et al., 2011). Candidates can re-watch a single teaching event multiple times, through different lenses, while pausing, rewinding, and re-watching, to develop the ability to identify critical classroom events during dynamic classroom situations (Martin & Ertzberger, 2013; McDuffie et al., 2014). Video analysis typically follows a recurring approach such as the *record, review, reflect, revise* cycle (Nagro et al., 2020a). In this approach, teacher candidates can *record* themselves teaching during a field experience, *review* the video evidence at their own pace and through multiple lenses, *reflect* on what they observe, and then make plans for *revising* instructional decision-making in preparation for future teaching experiences. This deliberate approach has resulted in deeper engagement in self-reflection, self-confrontation, and self-evaluation thus promoting increased pedagogical knowledge and improved instructional practice (e.g., Nagro et al., 2017; Nagro, 2020; Nagro et al., 2021; Nagro & Monnin, 2022).

Video analysis is often included as a requirement during student teaching field experiences and has even been linked to credentialing requirements (e.g., edTPA). Video analysis activities can be embedded across a range of teaching contexts because such activities are feasible, flexible, and robust.

Frequently capturing video evidence of teaching is feasible given ongoing advances in the video-recording capabilities of computers, tablets, and mobile devices. Video analysis is also flexible because teacher candidates can record any type of teacher led instruction (with proper parental permissions) and have an opportunity to learn from analyzing the video evidence. Recording portions of lessons for video analysis offer robust opportunities to review instruction and reflect on engagement methods, communication strategies, questioning techniques, content accuracy, feedback types, and language precision. However, the robust nature of video analysis can be overwhelming. For example, when tasked with watching video evidence of veteran teachers, 296 teacher candidates from one study could not identify specific examples of good instruction with accuracy, and instead emphasized static elements of teaching such as classroom set-up (Wiens et al., 2013). This is not surprising given that teacher candidates have described video analysis activities as challenging and time-consuming (Nagro et al., 2017). Without proper training, candidates do not know what to focus on and report extremely low levels of enthusiasm towards video analysis (Nagro et al., 2020b). Teacher candidates need a scaffolded approach to building capacity for video analysis activities that begin with the fundamentals of reflective practice. Therefore, the purpose of this article is to describe a three-phase sequential approach to developing teacher candidates as reflective practitioners. Specifically, the three phases begin with foundational skills of understanding practice, then shift to approaches for connecting practice, and finally transition to sophisticated professional growth opportunities through examining practice. The three phases are outlined in Figure 1 and detailed in subsequent sections.

## PHASE ONE: UNDERSTANDING PRACTICE

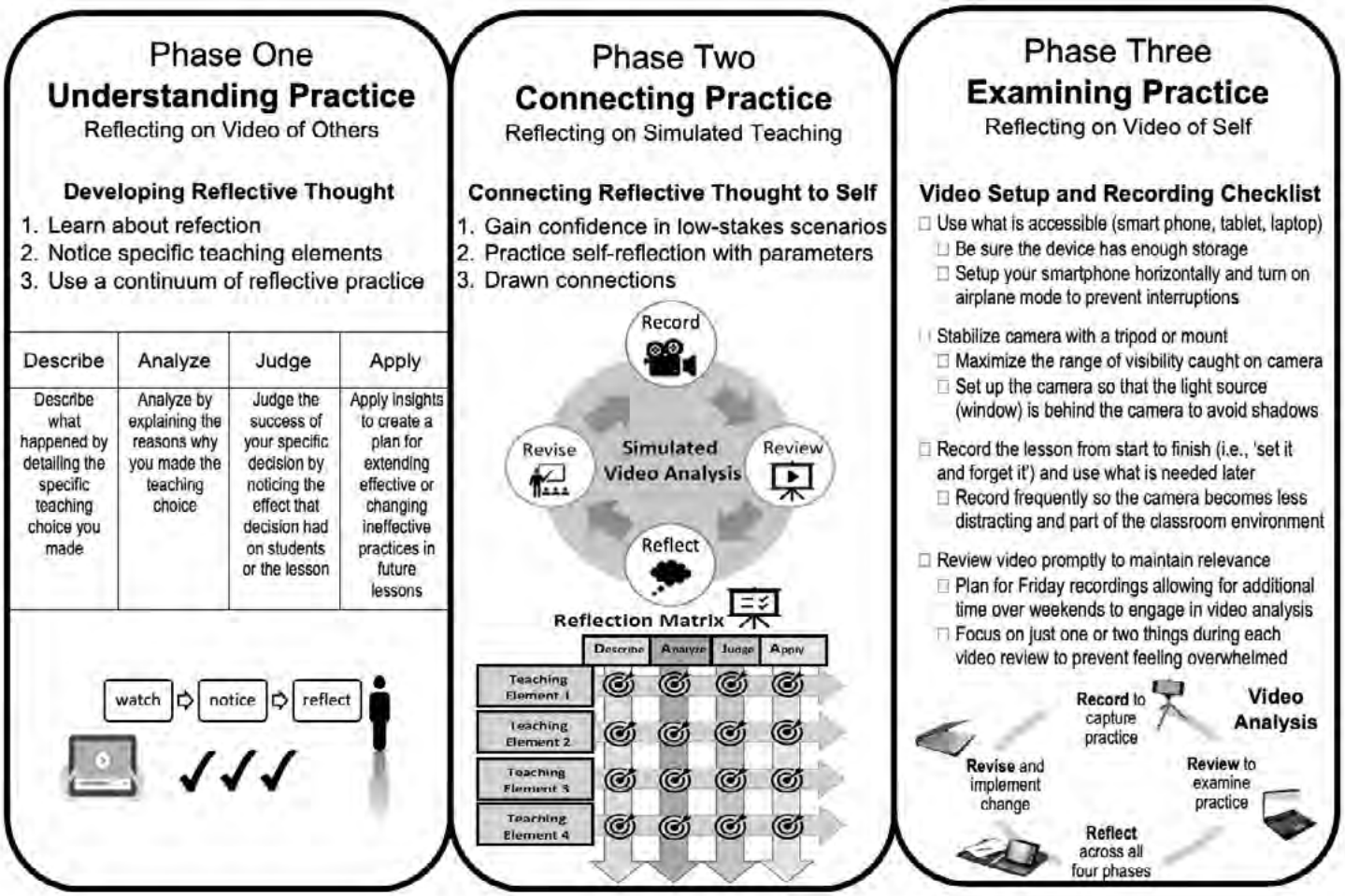
During this initial phase of understanding, the goal is to build foundational skills related to observing teaching to recognize instructional decision-making as it happens and learning about the importance of reflective practice (see Figure 1). Teacher candidates who have not learned how to observe teaching, whether it be recordings of themselves or others, tend to concentrate on student behaviors rather than their own, not yet seeing the classroom "through the eyes of the teacher" (Jenkins, 2014 p. 304). Observation opportunities such as reviewing video evidence of others are common in teacher education and likely a good first step towards building understanding. Teacher educators can use video evidence of other teachers (i.e., peers, veteran teachers, novice teachers) to help candidates learn how to notice dynamic elements of teaching rather than focusing on static components such as classroom set-up or the teacher's attire (e.g., van Es, 2014). Building class discussions around noticing specific teaching choices can both spotlight implementation approaches taken by different teachers and emphasize the teacher as the change agent in the classroom. This is more meaningful for candidates who otherwise center on student behaviors as the driver for undesired outcomes in the lesson or class schedule (e.g., deBettencourt & Nagro, 2019). Focusing on student behaviors during reflection activities is less helpful for teacher candidates who need to contemplate how they, as the facilitator of learning in the room, can structure their practice in a way that results in positive outcomes for their students. Overall, these foundational video-based activities are only helpful if teacher candidates know what to look for during such observation opportunities.

### Building Understanding Logistics

One method for guiding attention away from student actions and towards teaching actions is to use an observation framework during video-based reflection activities. This level of guidance further demystifies such activities. Teacher educators that already use an observation tool or other measurable teaching performance assessment for field experiences can use this same assessment tool to help teacher candidates learn what types of teaching characteristics they should focus on when reviewing and reflecting on teaching. Building understanding using well-defined definitions of quality teaching from vetted resources such as the high leverage practices, professional teaching standards, and teaching observation frameworks like the Danielson Framework (Danielson, 2013) or CT Scan (Kunemund et al., 2021) improves video review and peer discourse early on when candidates' knowledge of evidence-based teaching practices is likely emergent.

Once teacher candidates are able to discuss (in a group, with a peer, in writing) observed elements of instruction from video evidence, the next step is to introduce various types of reflective statements. Typically, the continuum of reflective practice spans from simple retelling to higher-order critical thinking or application type reflective statements (see Etscheidt et al., 2012 and Nagro & deBettencourt, 2018 for lists of reflective continuums by study). By reflecting using a continuum, teacher candidates can go beyond the initial recognizing and begin to examine instructional decision-making (Crawford et al., 2012; Gün, 2011). One popular approach to classifying reflective statements across a continuum includes four steps where teacher candidates *describe* past teaching choices, *analyze* why such choices were made, *judge* the success of those choices based on student

**FIGURE 1:** Three Phases of Sequencing Video-Based Reflection during Teacher Preparation




outcomes, and *apply* new insights to plans for future lessons (Coogle et al., 2019; Nagro & Monnin, 2022; O'Brien et al., 2020). The goal is for candidates to reflect comprehensively on each teaching event by using all four phases for reflection moving them through the complete critical thinking activity. Allowing candidates to learn about the reflective process using a continuum of reflective statements helps candidates develop a professional lens through which to recognize successful teaching in others and eventually in themselves.

## Building Understanding Parameters

Video-based observation and reflection activities at this early stage should be narrow in scope. One example for a narrow activity is asking candidates to clip or pin a portion of a video highlighting specific critical classroom events or instances of effective teaching (e.g., Bruce et al., 2015; Calandra et al., 2018). Candidates can pull specific examples where a selected teaching practice is illustrated, such as identifying a teaching segment when the teacher provided timely, specific, positive student feedback or when the teacher drew connections between the reading content, students' lives, and current world events. As candidates build their understanding of the dynamic nature of video observation, they can learn to identify specific elements of instruction with accuracy (Nagro & Monnin, 2022).

Video-based observation activities in the building understanding phase can occur in small groups allowing for peer-to-peer support. During these introductory activities, peer discussions may be particularly helpful for exposing candidates to alternative perspectives as well as focusing candidates on relevant rather than irrelevant elements of the video evidence (e.g., Jordan, 2012). Teacher candidates have reported that group reflection activities centered on video evidence of others are beneficial because they lead to collaborative meaning-making and force candidates to consider the nuances of critical classroom events (Nielsen, 2015). Overall, the goal is to build understanding so candidates can generalize lessons learned from reflecting on others' practice while subsequently reflecting on their own practice.

## PHASE TWO: CONNECTING PRACTICE

During the second phase in this sequential approach, the goal is to help candidates draw connections between their newly developed understanding of both video observation and reflection activities and their own teaching. Furthermore, phase two is intended to help candidates draw connections between their teaching decisions, their reasoning or initial thought process during planning, and observed student outcomes. Teacher candidates, who are new to capturing their own instruction on video, have expressed anxiety about reviewing their own video evidence (Calandra et al., 2018). During this phase, the focus is on practicing self-reflection in low-stakes scenarios to help candidates build confidence and minimize anxieties related to drawing new and lasting connections (see Figure 1).

### Drawing Connections Logistics

One low-stakes, yet meaningful, opportunity for video-based reflection is simulated teaching. Simulated teaching is an instructional scenario where the candidate experiences teaching in a controlled environment with specific parameters to target instructional objectives (University of New South Wales, 2015). Introducing a video-based reflection activity paired with simulated teaching scenarios may help candidates become more comfortable with the video-based aspects of these reflection activities. Simulations still challenge candidates to make decisions, try strategies, and problem solve with the goal of leading to new awareness of teaching. These simulations can take place in higher education classrooms where candidates teach to their peers playing the role of students (e.g., Nagro & Monnin, 2022), at home with a family member or neighbor (e.g., Peeples et al., 2019), or in virtual environments where candidates interact with avatars of students (e.g., Dieker et al., 2017). The benefits to simulated teaching include the ability to stop and restart at any point, the option to jump directly to a target portion of a lesson without having to move through the normal lesson progression, and to test a new teaching approach without practicing on real students.

During simulated teaching, candidates can use the same four phases of reflection (describe, analyze, judge, apply) introduced during the building understanding phase of this sequential approach to create a sense of continuity and familiarity around reflection activities. For example, candidates typically learn about explicit instruction within their methods courses, but rarely have an opportunity to practice using explicit instruction until they are in their student teaching field experiences if their mentor teacher supports their use of this type of instruction. During coursework, candidates can learn about and then practice using explicit instruction by selecting from Archer and Hughes' (2011) sixteen elements of explicit instruction. Depending on the goals of the class activity, candidates or their instructor can choose a small subset of the explicit instruction elements that focus on teacher behavior such as (a) setting clear expectations for learning; (b) modeling procedures through think alouds; (c) using clear and precise language with age appropriate vocabulary; (d) providing a range of examples and non-examples; and (e) asking frequent questions that require responses in varied forms (Archer & Hughes, 2011). Figure 2 includes these elements of explicit instruction in a graphic organizer, referred to as a reflection matrix, that can be used to structure the *record, review, reflect, revise* simulated video analysis activities in this phase. In this example, teacher candidates describe how they set clear expectations for learning, analyze their reasoning for why the learning goals were important, judge the success of their lesson introduction by pointing to student or lesson outcomes, and applying these insights for future teaching opportunities. This same process is repeated for each element in the reflection matrix. Building these connections between planning, teaching, and tracking student outcomes during this predictable yet relevant process strengthens the notion of teacher as change agent in the classroom.

### Drawing Connections Parameters

The simulated teaching experiences used during this drawing connections phase are not intended to replace authentic classroom experiences because as Chuanjun and Chunmei (2011) explained, teaching experiences that fall short of authentic classroom experiences are by design, artificial and limited. Recognizing the limitations of simulating teaching, this type of low-stakes environment can still serve as a valuable intermediary step towards developing reflective ability. The simulations do not have to be lengthy to be meaningful. Five minutes of recorded role-play offers candidates plenty of data to analyze. In fact, remaining narrow in scope is helpful to the overall learning objectives. Candidates can focus on learning to analyze video evidence of their teaching and reflect on targeted teaching choices without having to simultaneously differentiate between relevant and irrelevant information captured in a lengthy teaching video. Candidates can teach to a whole group or small group of their peers while capturing this teaching on video. Then, candidates can watch back their own video evidence to reflect by focusing on a specific element of teaching that may be the topic of discussion in each class or specified target

**FIGURE 2:** Reflection Matrix with Explicit Instruction Focus

| Focus Items | **Describe** what happened by detailing the specific teaching choice you made | **Analyze** by explaining the reasons why you made the teaching choice | **Judge** the success of your specific decision by noticing the effect that decision had on students or the lesson | **Apply** insight to create a plan for extending effective or changing ineffective practices in future lessons |
|---|---|---|---|---|
| **Set Clear Expectations for Learning**, explain lesson importance, and help students identify learning goals and expected outcomes. | | | | |
| **Model Proficient Performance** through think alouds to provide step-by-step procedures and clarify decision-making processes. | | | | |
| **Use Clear and Precise Language** with age appropriate vocabulary and sentence structure to be consistent and unambiguous. | | | | |
| **Provide a Range of Examples and Non-Examples** to set the scope for when and when not to apply a skill, strategy, concept, or rule | | | | |
| **Ask Frequent Questions** that require responses in varied forms (oral, written, action) to help focus and maintain learning engagement | | | | |

Note. The focus items for this reflection matrix were adapted from Archer and Hughes, 2011.

behaviors that are long-term goals to be revisited multiple times throughout the semester.

One challenge for teacher educators is structuring meaningful learning opportunities when some candidates may already be classroom teachers returning for additional preparation and other candidates enrolled in the same preparation course have no formal teaching experience. Role-play simulations paired with video analysis have been shown to support the professional knowledge, reflective ability, and instructional skills of candidates with ranging previous teaching experience and at differing points in their licensure programs (Nagro & Monnin, 2022). Thirty to 45 minutes of class time allows for candidates to record, review, reflect, revise in differentiated ways while also learning from one another. Whether acquiring new skills or refining existing skills, teacher candidates can benefit from reflecting on simulated teaching experiences to draw connections, deepen their understanding, and start to identify their strengths and weaknesses as educational professionals.

## PHASE THREE: EXAMINING PRACTICE

Once teacher candidates have learned what meaningful reflection is (and is not), and they have gained a level of comfort recording and reviewing their teaching on video, candidates are ready for phase three, examining their practice in authentic settings through video analysis. Video analysis is fundamentally different from other forms of video-based reflection activities. During video analysis, teacher candidates watch video evidence of their own teaching from authentic classroom settings rather than reviewing video evidence of others (phase one) or video evidence captured during role-play (phase two). Video analysis has been shown to result in higher levels of immersion in and motivation for genuine teaching reflection when compared to reflecting on video evidence of others (Seidel et al., 2011) or video evidence from simulated environments (Chuanjun & Chunmei, 2011). Advances in technology have increased the feasibility of capturing video evidence in authentic settings, and there are simple suggestions for improving the learning experience (see Figure 1).

## Examining Practice Logistics

Figure 1 includes a checklist for teacher candidates to use as they prepare to engage in video analysis. Despite increased flexibility, key logistical considerations such as setting up the camera to maximize the range of classroom visibility while accounting for microphone capacities are important to discuss with candidates. This checklist can guide practice video-recording sessions to ease nerves and improve the quality of teaching videos used for reflection activities. Video analysis is a meaningful yet challenging activity. Reducing frustration for candidates related to technology and logistics are a worthwhile consideration. Creating inexpensive recording kits to supplement smartphones or other recording devices can drastically improve visual and audio quality without breaking the bank. First, headphone port or Bluetooth microphones can boost sound quality especially when it is important to capture student responses even when student faces are not captured on video. Second, tabletop or spider tripods are affordable and can provide candidates more options when setting up their smartphone for classroom recording. Third, inexpensive, clip-on fish lenses can be positioned over top of smartphone and laptop cameras increasing the range of sight. Capturing more of the classroom may be critically important for analysis activities depending on the focus teaching behaviors.

Beyond camera set-up, having a plan for video sharing and storage should not be overlooked. Unlike the earlier phases of this sequenced approach, where video files were for the candidates' eyes only, the video files captured in phase three may be needed for supervisor observation activities and video analysis activities. Video files are large and cannot be emailed. The confidentiality of P-12 students caught on camera needs to be a primary consideration when planning how and where video files will be shared and stored. Students and their families will want to understand how their identities will be protected. It is important to seek out and follow consent guidelines which are likely to differ by school setting or even potentially from one classroom to the next. Emphasizing that the focus is the teacher candidate and that the purpose is a learning tool for candidates and not intended to put children at risk in any way is also helpful. Regarding privacy, password protected course sites such as Canvas and Blackboard are great options if private folders are created so that each candidate can only see their own video files. Other options such as saving video files on password protected flash drives can work when distance between parties is not a factor. Last, cloud storage such as OneDrive, Dropbox, or Google Drive can work if security procedures are carefully considered.

## Video Analysis Parameters

Once camera set-up and file storage logistics are decided, decisions about video analysis parameters should be considered. First, the target video length will need to be determined. Five minutes of recorded-role play may have been sufficient in preparatory activities, but candidates learning to observe their authentic teaching accurately will need to see the broader context of their instruction nested within a dynamic classroom. This requires a bit more time, but the number of minutes may not be the right parameter to set. Pianta and colleagues (2008) conducted a large-scale study with 113 early childhood teachers and found that as the teaching videos increased in time, so did the likelihood of capturing effective teaching practices (Pianta et al., 2008). However, standardizing the number of minutes to video-record, does not necessarily translate across grade levels or classroom contexts where a 10-minute clip could be the entire lesson or just the warm-up activity. Setting the video-recording parameters to allow for teacher behaviors to be observable during video review and keeping the focus on teacher rather than student can help students in ranging contexts all find common ground. Regardless of grade-level, content area, or student population, teacher candidates can focus on capturing a lesson with a beginning, middle, and end (e.g., Nagro et al., 2017) or can plan to capture the teacher led instruction portion of a lesson (e.g., O'Brien et al., 2020). These guidelines will help clarify expectations when setting parameters and maintain flexibility.

Deciding on which teaching behaviors to focus on is another area of flexibility. Even after improving candidates' familiarity with identifying teaching elements using video evidence as well as how to reflect through a scaffolded process, (e.g., maintaining a narrow focus during video analysis) can improve accuracy. Hager (2012) conducted a single case multiple baseline study replicated across teacher behaviors to see if video analysis used to self-evaluate would result in improved instructional skills. The educator self-selected teaching behaviors to monitor and track using video clips. Hager (2012) reported the educator was able to improve in five of the seven self-selected practices: (a) the number and variation of praise statements given during a lesson; (b) the rate of opportunities for student response; (c) the rate of visual scanning of the room; (d) the ratio of praise to redirection statements; and (e) implementation fidelity of all steps outlined in the lesson. Hager's (2012) work demonstrates candidates can benefit from video analysis, but these findings may also suggest an extensive list of

teaching elements can become overwhelming for candidates. Patterns in video analysis research suggest narrowing the focus to between three and five teaching behaviors is best (Nagro & deBettencourt, 2018). Analyzing fewer aspects of teaching during each video analysis cycle makes the process more feasible and allows candidates more time for critical contemplation rather than the review process becoming something more closely related to an implementation checklist (e.g., Hager, 2012). Eventually, teacher candidates can write these video-based reflections in narrative form, especially if credentialing activities require narrative reflections, but beginning early self-reflection activities with a reflection matrix offers candidates a concrete approach to on-topic reflection activities. Including operational definitions in the reflection matrix (Figure 2) reinforces understanding of best practices and directs the teacher candidates' attention to relevant information captured on video during their recorded lesson.

After deciding on camera set-up, length of video, and number of focus teaching elements, the final aspect of examining practice to consider is the frequency of video analysis sessions. The research on video analysis as a teacher education approach does not adequately define the ideal video analysis schedule. Morin and colleagues (2021) conducted a meta-analysis of single-case research on video analysis and concluded that even one recording opportunity was shown to be beneficial for teacher candidates. However, one of the benefits of video analysis is the ability to measure growth across time through both the video evidence and corresponding reflection or self-evaluation activities. Introducing multiple videos allows for growth to be tracked over time and helps both candidates and their P-12 students become more comfortable with the technology and logistics. Scheduling video analysis recording sessions at the beginning, middle, and end of a given field experience seems feasible and allows for measuring growth over time. Additionally, Friday recording sessions are ideal for two reasons. First, field experience expectations include grading student work, analyzing student data, and lesson planning during the week so weekends might offer more time for careful contemplation and self-reflection. Second, although the purpose is not to analyze student performance, timely video review does sometimes allow for this added benefit where teacher candidates can get a concrete sense for students' present levels of performance as they plan for the following week. The ideal video analysis schedule will depend on individual goals, realities of field placements, and acknowledgment of how video analysis can best complement existing preparation activities.

> Introducing structured reflection activities early and often may help candidates see this important practice as a critical part of their preparation rather than one more box to check off before graduation.

## Conclusion

Video-based reflection activities are becoming commonplace within teacher preparation field experiences. Formally, more than 600 teacher preparation programs across the United States require video analysis activities as part of their pathway to teacher licensure (Pearson Education, 2014). If video analysis is a required activity for program completion or even licensure, developing an understanding of video observation and reflective processes should not occur at the same time performance is being evaluated. Introducing structured reflection activities early and often may help candidates see this important practice as a critical part of their preparation rather than one more box to check off before graduation.

Using a sequential approach to first build foundational skills of understanding and connecting can help to demystify expectations when teacher candidates are asked to examine their practice during culminating preparation activities. This sequenced approach can be introduced over several courses leading up to and including culminating field experiences or within one course with thoughtful planning. Introducing preliminary video-based reflection activities before asking candidates to engage in video analysis will help to address the learning curve associated with these corresponding technologies as well as this type of critical reflection. Upon program completion, the goal is for teacher candidates to understand the importance of reflective practice as well as the utility of video-based reflection activities. Reflective practitioners can rely on examining their practice as an approach to refining their professional style well after they move on from formal preparation if the groundwork is established early. New teachers can use video-based reflection activities in peer mentoring groups or individually to support their own induction and retention efforts.

## References

Archer, A. L., & Hughes, C. A. (2011). *Explicit instruction: Effective and efficient teaching.* Guilford Publications.

Beck, R. J., King, A., & Marshall, S. K. (2002). Effects of videocase construc-

## ABOUT THE AUTHOR


### Sarah A. Nagro

*Sarah A. Nagro, Ed.D. is an associate professor of special education at George Mason University where her research focuses on preparing profession-ready teachers through meaningful field-based experiences that emphasize reflection, video analysis, self-evaluation, and professional buy-in. Sarah is interested in understanding how to help teacher candidates and novice teachers find success when educating students with disabilities with the goal of retaining high quality professionals.*



tion on teacher candidates' observations of teaching. *Journal of Experimental Education*, 70, 345-361. https://doi.org/10.1080/00220970209599512

Bruce, D., Yerrick, R., Radosta, M. and Shively, C. (2015). Affordances of digital video editing among prospective English and science teachers. *Video Research in Disciplinary Literacies* (Literacy Research, Practice and Evaluation), 6, 641-657. https://doi.org/10.1108/S2048-045820150000006002

Calandra, B., Brantley-Dias, L., Yerby, J., & Demir, K. (2018). Examining the quality of preservice science teachers' written reflections when using video recordings, audio recordings, and memories of a teaching event. *Contemporary Issues in Technology & Teacher Education*, 18(1). https://citejournal.org/volume-18/issue-1-18/science/when-using-video-recordings-audio-recordings-and-memories-of-a-teaching-event

Calandra, B., Gurvitch, R., & Lund, J. (2008). An exploratory study of digital video editing as a tool for teacher preparation. *Journal of Technology and Teacher Education*, 16(2), 137–153. https://www.learntechlib.org/p/23496/

Chuanjun, H., & Chunmei, Y. (2011). Exploring authenticity of microteaching in pre-service teacher education programmes. *Teaching Education*, 22(2), 291-302. https://doi.org/10.1080/10476210.2011.590588

Coogle, C., Nagro, S. A., Regan, K., O'Brien, K., & Ottley, J. (2019). Impact of eCoaching with video-based reflection on early childhood teacher candidates' use of communication strategies and on child's use of expressive language. *Topics in Early Childhood Special Education.* Advance online publication. https://doi.org/10.1177/0271121419857142

Council for Exceptional Children. (2020, August). *Initial practice-based professional preparation standards for special educators.* https://exceptionalchildren.org/sites/default/files/2021-03/K12%20Initial%20Standards%20and%20Components.pdf

Council for Exceptional Children. (2015). *What every special educator must know: Ethics, standards and guidelines*. http://pubs.cec.sped.org/p6166/

Council of Chief State School Officers. (2021, October). *Interstate teacher assessment and support consortium InTASC model core teaching standards and learning progressions for teachers 1.0: A resource for ongoing teacher development.* https://ccsso.org/resource-library/intasc-model-core-teaching-standards-and-learning-progressions-teachers-10

Crawford, S., O'Reilly, R., & Luttrell, S. (2012). Assessing the effects of integrating the reflective framework for teaching in physical education (RFTPE) on the teaching and learning of undergraduate sport studies and physical education students. *Reflective Practices*, 13(1), 115-129. https://doi.org/10.1080/14623943.2011.626025

deBettencourt, L. U., & Nagro, S. A. (2019). Tracking special education teacher candidates' reflective practices over time to understand the role of theory in clinically-based teacher preparation. *Remedial and Special Education*, 40(5), 277-288. https://doi.org/10.1177/0741932518762573

Danielson, C. (2013). *The framework for teaching evaluation instrument.* The Danielson Group.

Dewey, J. (1933). *How we think.* Prometheus Books.

Dieker, L. A., Hughes, C. E., Hynes, M. C., & Straub, C. (2017). Using simulated virtual environments to improve teacher performance. School University Partnerships (Journal of the National Association for Professional Development Schools): *Special Issue: Technology to Enhance PDS*, 10(3), 62-81.

Etscheidt, S., Curran, C. M., & Sawyer, C. M. (2012). Promoting reflection in teacher preparation programs: A multilevel model. T*eacher Education and Special Education*, 35(1), 7-26. https://doi.org/10.1177/0888406411420887

Gün, B. (2011). Quality self-reflection through reflection training. *ELT Journal English Language Teachers Journal*, 65(2), 126-135. https://doi.org/10.1093/elt/ccq040

Hager, K. D. (2012). Self-monitoring as a strategy to increase student teachers' use of effective teaching practices. *Rural Special Education Quarterly,* 31(4), 9-17. https://doi.org/10.1177/875687051203100403

Jordan, L. (2012). Video for peer feedback and reflection: Embedding mainstream engagement into learning and teaching

practice. *Research in Learning Technology*, 20(1), 16-25. http://dx.doi.org/10.3402/rlt.v20i0.19192

Kalk, K., Luik, P., Taimalu, M., & Täht, K. (2014). Validity and reliability of two instruments to measure reflection: A confirmatory study. *Trames: A Journal of the Humanities & Social Sciences*, 18(2), 121-134. http://dx.doi.org/10.3176/tr.2014.2.02

Khan, M. I. (2017). Reflection and the theory-practice conundrum in initial teacher education in the UK. *FWU Journal of Social Sciences*, 11(1), 64-71.

Kunemund, R. L., Kennedy, M. J., Carlisle, L. M., VanUitert, V. J., & McDonald, S. D. (2021). A multimedia option for delivering feedback and professional development to teachers. *Journal of Special Education Technology*. https://doi.org/10.1177/01626434211004121

Martin, F., & Ertzberger, J. (2013). Here and now mobile learning: An experimental study on the use of mobile technology. *Computers & Education*, 68, 76-85. http://dx.doi.org/10.1016/j.compedu.2013.04.021

McDuffie, A. R., Foote, M. Q., Bolson, C., Turner, E. E., Aguirre, J. M., Bartell, T. G., & ... Land, T. (2014). Using video analysis to support prospective K-8 teachers' noticing of students' multiple mathematical knowledge bases. *Journal of Mathematics Teacher Education*, 17(3), 245-270. https://doi.org/10.1007/s10857-013-9257-0

Morin, K., Nagro, S. A., Artis, J., Haas, A., Vannest, K. J., & Ganz, J. B. (2021). Differential effects of video analysis for special educators related to intervention characteristics, dependent variables, and student outcomes: A meta-analysis of single-case research. *Journal of Special Education Technology* 36(4), 202-214. https://doi.org/10.1177/0162643419890250

Mulryan-Kyne, C. (2021). Supporting reflection and reflective practice in an initial teacher education programme: An exploratory study. *European Journal of Teacher Education*, 44(4), 502-519, https://doi.org/10.1080/02619768.2020.1793946

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. https://doi.org/10.1177/0022487119872700

Nagro, S. A., & deBettencourt, L. U. (2018). Reflection activities within clinical experiences: An important component of field-based teacher education. In T. E. Hodges & A. C. Baum (Eds.), *The Handbook of Research on Field-Based Teacher Education* (pp 565-586). Hershey, PA: IGI Global.

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. https://doi.org/10.1177/0888406416680469

Nagro, S. A., Hirsch, S., & Kennedy, M. (2020a). 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., & Monnin, K. (2022). Using simulated video analysis to promote special education teacher candidates' professional knowledge and reflective ability. *Teacher Education and Special Education*. https://doi.org/10.1177/08884064211059854

Nagro, S. A., Raines, A. R., Hooks, S., Fraser, D. W., & Nagy, S. (2020b). The connection between teacher candidate attitude and accuracy during performance-based self-evaluation activities. *Journal of Special Education Technology*, 37(1), 22-34. https://doi.org/10.1177/0162643420947827

Nagro, S. A., Regan, K., Coogle, C. G., O'Brien, K. M., *Raines, A. R., & *Wade, C. B. (2021). Promoting reflective ability through a comprehensive field experience that combined video analysis and bug-in-ear coaching. *Journal of Special Education Technology*. https://doi.org/10.1177/01626434211022005

Nielsen, B. L. (2015). Pre-service teachers' meaning-making when collaboratively analyzing video from school practice for the bachelor project at college. *European Journal of Teacher Education*, 38(3), 341-357. https://doi.org/10.1080/02619768.2014.983066

O'Brien, K. M., Regan, K., Coogle, C. G., Ottley, J. R., & Nagro, S. A. (2021). Impact of eCoaching with video-based reflection on special education teacher candidates' instructional skills. *Teacher Education and Special Education*, 44(2), 160-182. https://doi.org/10.1177/0888406420964732

Pearson Education. (2014). *edTPA fact sheet*. http://edtpa.aacte.org/about-edtpa

Peeples, K. N., Hirsch, S. E., Gardner, S. J., Keeley, R. G., Sherrow, B. L., McKenzie, J. M., Randall, K. N., Romig, J. E., & Kennedy, M. J. (2019). Using multimedia instruction and performance feedback to improve preservice teachers' vocabulary instruction. *Teacher Education and Special Education*, 42(3), 227- 245. https://doi.org/10.1177/0888406418801913

Pianta, R.C., Mashburn, A. J., Downer, J. T., Hamre, B. K., & Justice, L. (2008). Effects of web-mediated professional development resources on teacher-child interactions in pre-kindergarten classrooms. *Early Childhood Research Quarterly,* 23(4), 431-451. https://doi.org/10.1016/j.ecresq.2008.02.001

Seidel, T., Sturmer, K., Blomberg, G., Kobarg, M., & Schwindt, K. (2011). Teacher learning from analysis of videotaped classroom situations: Does it make a difference whether teachers observe their own teaching or that of others? T*eaching and Teacher Education,* 27, 259-267. https://doi.org/10.1016/j.tate.2010.08.009

Slade, M. L., Burnham, T. J., Catalana, S. M., & Waters, T. (2019). The impact of reflective practice on teacher candidates' learning. *International Journal for the Scholarship of Teaching and Learning*, 13(2), article 15. https://doi.org/10.20429/ijsotl.2019.130215

University of New South Wales. (2015). *Teaching for learning: Simulations*. https://teaching.unsw.edu.au/simulations

van Es, E. A. (2014). Viewer discussion is advised: Video clubs focus teacher discussion on student learning. *Formare, Open Journal per la formazione in rete*, 14(2), 98-103. https://doi.org/10.13128/formare-15144

Wiens, P. D., Hessberg, K., LoCasale-Crouch, J., & DeCoster, J. (2013). Using a standardized video-based assessment in a university teacher education program to examine preservice teachers' knowledge related to effective teaching. *Teaching and Teacher Education*, 33, 24-33. https://doi.org/10.1016/j.tate.2013.01.010