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Developing Expertise: Using Video to Hone Teacher Candidates' Classroom Observation Skills

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ABSTRACT

This article explores the impact of a video observation model developed for teacher candidates in an early experiences course. Video Grand Rounds (VGR) combines a structured observation protocol, videos, and directed debriefing to enhance teacher candidates' observations skills within nonstructured and field-based observations. A comparative research design was employed for this VGR study, and both quantitative and qualitative data inform the results. Findings indicate that VGR teacher candidates demonstrated significantly greater growth than non-VGR teacher candidates in their abilities to focus on salient features of classroom interactions to identify the complexity of classroom interactions and to readily transfer observation skills from a video platform to an in-school platform.

Classroom observations have long been an unchallenged staple of teacher-education programs throughout the United States. Each semester teacher candidates (TCs) at various stages in their development trek to the classrooms of teachers in order to carry out observation hours. Over the last several years, however, teacher-education programs and professional development efforts have begun turning to video for several reasons: (a) videos mitigate the inherent difficulty of identifying appropriate classroom placements for all TCs, an especially daunting task for large programs; (b) they serve as a vehicle for sharing classroom interactions, exemplary practices, and specific learning experiences (Borko, Jacobs, Eiteljorg, & Pittman, 2008; Youens, Smetham, & Sullivan, 2014); and (c) a growing body of research suggests that viewing videos focused on classroom interactions and instruction prompts TCs to reflect more deeply on classroom interactions (MacLean & White, 2007) and engage more actively and personally in the observation event (Goldman, 2007). In response, a growing number of teacher-education programs are embedding video at different points in their curriculum (Cuthrell et al., 2014; Hatch, Shuttleworth, Jaffee, & Marri, 2014).

During the 2012–2013 academic year, while engaging in a series of program revisions, elementary-education faculty at a large, public university

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turned to video to address concerns about their early field experience course. That course, taken in the sophomore year, included a 16-hour field-placement requirement. In total, TCs spend 111 hours in the field before their internship, and the 16 hours required in the early experience course represented 14% of those 111 hours (Dobson, 2013). Often, however, the early experience observation hours did not provide the level of focused, meaningful experiences that the faculty desired. Both tenure and nontenure faculty taught the course, and despite efforts to provide meaningful observations, clinical teachers (in-service teachers hosting TCs) could rarely predict with certainty what would be occurring in their classroom weeks ahead of time. As a result, TCs sometimes found themselves observing a class of students taking a test or reading silently for a block of time. Within this context, TCs seemed at times to be merely clocking hours in the early experience course without consistency in what they did or did not observe.

In an effort to capitalize on their TCs' first experience of looking at classroom interactions not as students but as future teachers, faculty sought to enhance what the candidates saw while encouraging them to develop the observation and reflection skills that they needed most in order to become well-started beginning teachers. As a result, the Video Grand Rounds (VGR) model was developed and implemented.

Relevant literature

This research on the VGR model called upon three interrelated constructs: the theoretical framework of pedagogies of practice, the practical application of classroom videos as case studies, and the conceptual framework of medical grand rounds.

Pedagogies of practice

The theoretical frame for reconfiguring this program's elementary education's early field experience course drew on the notion of *pedagogies of practice* (Grossman et al., 2009) as informed by Schön's (1987) emphasis on coaching and low-risk learning environments. Schön asserted that opportunities to practice under the tutelage of individuals who were already initiated into and experienced in a profession were essential to a novice's development. Further, he highlighted the positive impact of low-risk settings that permit novices to make and enact decisions in the presence of more knowledgeable others within the profession (1987). In their work, Grossman et al. (2009) identified three key components for understanding the pedagogies of practice in programs of professional education: representations, decomposition, and approximations. Grossman et al. (2009) define representation of practice as the ways that an element of educational practice is

embodied and made visible to the novice: in elementary education's case, the teacher candidate. Decomposition refers to breaking down visible practice into parts so that novices may learn the practice. Finally, approximation refers to the novice's opportunities to begin to engage in professional practices. The research described here focused on the first two components of pedagogies of practice: representation and decomposition.

In describing representation, Grossman et al. (2009) consider the complexity that novices to a field must face each time they attempt to understand a new facet of their profession. Two discrete factors inform the pedagogy of practice: "pedagogical actions" and associated "thought processes" (p. 2067); yet, often when teachers represent their practice, they privilege one component over the other. As a result, a novice teacher candidate may *see* the practice but not recognize the thought processes behind it or, conversely, may *hear* the thought processes without seeing the actual practice. One may be visible; the other may be hidden.

The second component in the theoretical frame of Grossman et al. (2009), decomposition, involves identifying the elements that are critical to a particular profession's practice. Once identified, these elements become the focus of explicit instruction in order to build knowledge and skill. Examples of practice that are common to teacher education at all levels and that benefit from decomposition include lesson and unit planning. In decomposing the practice of lesson and unit planning, educators provide TCs with a means through which to view, to consider, to examine, and to enact the various elements required to plan a lesson.

Complicating TCs' efforts to observe and understand practices and classroom interactions in meaningful ways during their early field experiences, however, is one common factor: their position as students. The dozen or more years that TCs have spent as K–12 classroom students, and their continuing position as students within their teacher-education program, predisposes them to apply the lens of a student rather than the lens of a teacher in viewing classroom settings. Consequently, as several studies have noted, TCs must be taught during early observation experiences to see the classroom from a teacher's perspective and to connect and apply university coursework to the classroom (Greene, 2009; Hult & Edens, 2001; McDevitt, 1996).

What, then, do these concepts suggest to teacher educators working with beginning TCs? Schön (1987) asserts that those engaged in professional education require not only opportunities to learn by doing but also careful coaching in low-risk settings by others who have already been initiated into the profession. Grossman et al. (2009) argue that

> to help novices develop such professional vision or disciplined perception of a complex practice, instructors must first possess a set of categories for describing practice and then, during instruction, focus students' attention on these

> components of practice. By decomposing complex practices, professional educators can help students learn first to attend to, and then to enact, the essential elements of a practice. (p. 2069)

Thus, as TCs make their first forays into classrooms, not as students, but as future teachers, they require education instructors prepared and willing to identify essential aspects of representations, to decompose elements of practice, and to provide structured, supported opportunities to develop and apply essential skills.

Videos as case studies

Research conducted over the last 10 years suggests that case studies (Merriam, 1998) are effective in encouraging TCs to recognize important aspects of instruction in classroom settings (Brophy, 2004; Marsh, Mitchell, & Adamczyk, 2010). Rooted in the concept of the situative perspective (Putnam & Borko, 2000) and adapted from the Theory of Situated Cognition (Brown, Collins, & Duguid, 1989), which asserts that learning must occur within authentic contexts, case studies provide TCs with authentic experiences and have been used in law, business, and medical schools. In teacher education, videos of classroom interactions are increasingly being viewed as components of case study and are being employed as effective means of engaging and instructing TCs.

Video offers several advantages over live classroom observations in the field. First, videos are predictable and reliable. Because a video does not change from one viewing to the next, faculty know exactly what will occur in each particular video. Second, when all members of a group view the same video, that video becomes a common text, able to be referenced by all. Third, events can be slowed down and viewed numerous times, allowing for opportunities for discussion and reflection. Moreover, a growing body of research affirms the impact of video as an instructional tool when combined with appropriate faculty-provided structure and guidance (Brophy, 2004; Greene, 2009; Hult & Edens, 2001; Marsh et al., 2010; McDevitt, 1996; Santagata, Zannoni, & Stigler, 2007; Star & Strickland, 2008). Specifically, Sonmez and Hakverdi-Can (2012) found that science education TCs showed progress in their ability to analyze the strengths and weaknesses of a lesson and to identify salient aspects of the teaching process when they viewed and discussed topic-specific videos. Likewise, Santagata et al. (2007) used videos for two years in a teacher-education program to teach lesson analysis and found that when they provided a specific framework to guide observations, TCs' comments on the video moved from simple descriptions of the teaching event to describing the effects instruction was having on the learner.

Hence, the use of video as a strategy for observational training in early experience courses in teacher-education programs meets multiple criteria for effective teacher education. It honors the importance of providing TCs with learning opportunities situated within authentic contexts (Putnam & Borko, 2000) while simultaneously providing an avenue for their learning to be structured, guided, and discussed by and with faculty instructors.

Video grand rounds

The final construct of this study concerns the conceptual frame provided by an instructional strategy borrowed from the medical world: *rounding* (DelPrete, 1997; Roegman & Riehl, 2012; Thompson & Cooner, 2001). During medical grand rounds, a group of medical students at a novice level in their training accompanies a licensed medical doctor to observe the experienced doctor's treatment of patients. After the patients have been seen, the group and doctor engage in discussions regarding what the medical students observed about the patients' symptoms, needs, immediate medical treatment, and follow-up care (Cuthrell et al., 2014; Hebert & Wright, 2003). When this model is applied to a teacher-education setting, video clips of classroom teaching take the place of visits to patients and provide the basis for discussion on the elements of quality instruction and of positive learning environments. Just as medical students gain medical expertise through their discussions with the experienced doctors, TCs develop educational expertise through their discussions with faculty instructors.

Hence, the Video Grand Rounds (VGR) model introduces a conceptual framework for novice TCs' observations using video clips as common, shared texts that provide standardized and efficient means for guiding classroom observation experiences. VGR requires TCs to view a series of four classroom-based videos, one video per week, to complete a structured observation protocol after watching each video, and to participate in a whole-class debriefing discussion with classmates and a faculty member following each video observation. (See Appendix A for the observation protocol). During these debriefing sessions, faculty intentionally model how classroom teachers might think about the events shown in the video. Through prompting questions from the protocol, faculty encourage TCs to view classrooms from the perspective of a teacher, rather than through the lens of a P–12 classroom student, a position that TCs have occupied for most of their academic careers. For example, a course instructor might initiate discussion of the video by asking, "What did you observe about the learning environment?" Students' responses guide the ensuing discussion, as the instructor identifies *in-the-moment* opportunities to prompt TCs'
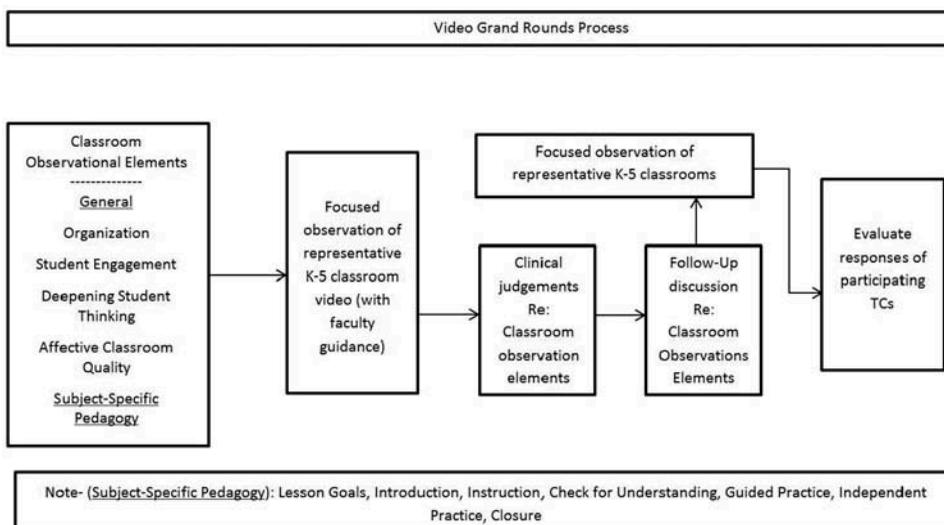
Figure 1. Video grand rounds process.

observation skill development and complex thinking about pedagogies of practice (Grossman et al., 2009). The overarching goal of the VGR model, then, is to provide TCs with structured opportunities to develop the observation skills necessary to focus on elements of quality instruction. Figure 1 outlines the classroom observation process for the VGR model in the early experience course.

Methodology

A comparative research design was employed for this VGR model study. The comparative method (Charles, 1998; Gay & Airasian, 2000; Gliner & Morgan, 2000; Martella, Nelson, & Marchand-Martella, 1999) examines the presumed effect of an independent variable as differences among groups are explored. For the purpose of this study, the performance of TCs in the sections using the treatment (VGR model: incorporation of classroom videos for observation, structured observation protocol, in-class debriefing conversations) prior to observing school classrooms in the field were compared to the performance of TCs not participating in the VGR model prior to observations of school classrooms in the field. A variety of outcome measures were used to compare performances between the two groups to determine if there was a measurable difference in the TCs' transfer of skills and knowledge. All participants in this research were enrolled in a one-credit early experience education course and were limited in their prior knowledge of both curricular context and instructional strategies.

Procedures

In spring 2014, 65 sophomore-level TCs participated in the VGR model study. All were assigned to either a treatment or control group based on course section enrollment. Seventeen TCs were in the control group; 10 (59%) agreed to allow their data to be used. Forty-eight TCs were enrolled in the treatment group; 34 (71%) agreed to allow their data to be used.

TCs in the treatment group (VGR group) used a locally developed, structured observation protocol as a guide for viewing four video clips (one clip per week) prior to engaging in observations in the field. (See Appendix A.) The protocol included general elementary classroom elements to be observed and subject specific pedagogy elements. Language from the program's summative performance assessment was incorporated in the protocol. When selecting the videos, faculty considered grade level, subject, length, and alignment to course topics to build a corpus of videos that provides TCs with opportunities to observe a complex mélange of classroom settings and interactions. Videos included commercially produced and locally produced clips. Short videos (ranging from 7 to 28 minutes) were preferred so that TCs could watch the videos multiple times as they developed their observation skills in the VGR experience. TCs enrolled in the control group engaged only in observations in the field without the use of videos, observation protocols, or debriefing sessions.

TCs enrolled in the VGR sections were provided a multicomponent treatment. In order to satisfy 12 of the 16 hours of required observation, the VGR group engaged in the following:

(1) Beginning in Week 5 of the semester, they viewed, outside of class time, one video per week for four consecutive weeks.
(2) They completed an observation protocol form for each video they watched.
(3) They participated weekly in instructor-led, debriefing session about what was observed in the video clips.

After the four videos had been viewed and discussed, the final 4-hour observation requirement was satisfied with observations in the field. The VGR group completed an observation protocol on the field observations and then participated in a final in-class debriefing session during which they discussed their field experience observations. As shown in Figure 1, the use of representative classroom video clips preceded the sequence of field observations and the follow-up debriefing session. All debriefing sessions were led by the faculty of record for the course. The same faculty member led each debriefing. Prompts from the observation protocol guided the debriefing.

The control group of TCs participated in the elementary program's traditional, business-as-usual activity: observing local elementary classrooms in the field for 16 hours. Because debriefings were never part of the traditional model, the control group did not participate in any debriefings. After completing observation protocols on the field observations, however, both the control group and the VGR group wrote practicum reflection essays in response to a common prompt. The final exam, administered to both groups at the end of the semester, included a section (Part B) that required that TCs watch a video of an elementary class and describe and reflect on what they observed. (See Appendix B.)

Data collection

Documents collected throughout the study included (a) completed locally developed observation protocol forms, (b) transcriptions of recorded in-class debriefing sessions, (c) reflective essays about the overall practicum experience focusing on TCs' learnings from their observations, and (d) observation and reflection responses to a final exam video. (See Appendices A and B.)

Data analysis

Both quantitative and qualitative data inform the results of this study. Rubric scores from the completed, locally developed observation protocol forms were used in the quantitative data analysis, and data from the other three documents inform qualitative data analysis.

The rubric scores from the completed observation protocols were analyzed using tests for statistical significance and practical significance. Tests included a t test and correlation test. Cohen's d was also calculated due to a small control sample size (Cohen, 1988). Though the small sample size can be misleading, the Cohen's d can suggest a large practical significance in which the large effect size is controlled in regards to variance in standard deviation. These data were then analyzed to address the quantitative question:

RQ$_1$: Is there a difference between teacher candidates' observations skills and knowledge transfer from video observation to observations in the field when candidates are exposed to the VGR (incorporation of classroom videos for observation, structured observation protocol, in-class debriefing conversations) model?

H_1: There is a difference between teacher candidates' observations skills and knowledge transfer from video observation to observations in the field when candidates are exposed to the VGR model.

H_0: There is no difference between teacher candidates' observations skills and knowledge transfer from video observation to observations in the field when candidates are exposed to the VGR model.

The qualitative approach of this study employed the constant comparative method (Glaser & Strauss, 1967) using an emergent coding system for the remaining three data sets: transcriptions of recorded in-class debriefing sessions; reflective essays about the overall practicum experience that focused on what TCs learned from their observations; and observation and reflection responses to a final exam video. The initial step of data analysis involved a preliminary examination of the data sets in which a checklist of initial categories was created based on the observation protocol. This checklist of categories was then used in order to code the contents of each data set. Two researchers coded the data independently. Interrater reliability was evaluated by randomly selecting 10% of coded data, which were re-coded by the second researcher. Interrater reliability (coding agreements/total number of codes) was greater than 85% for the selected data. Once interrater reliability was established, the resulting analysis was compared and renegotiated.

As the responses were coded, four major categories emerged from the data: (a) *the teacher*, which included personal or affective comments about the teacher and/or appraisal of the teacher's work; (b) *classroom management*, involving teacher-implemented strategies used to manage the classroom; (c) *the students*, which included students' affective reactions to instruction, their behaviors, and diverse academic and cultural needs; and (d) *student/teacher interactions*, which included observations related to respect between the students or between the students and their teacher, cooperation, compliance, and other comments related to the classroom environment. Within this code, respect and cooperation were characterized as listening to other's ideas, accepting thoughts from others, using positive voice and language, raising hands to share ideas, and showing concern/consideration. Compliance was defined as following instructions and rules within the classroom. The final round of analysis involved the use of descriptive statistics in order to provide an overall summary of the findings and observations made from the qualitative description of the data. Descriptive statistics affords researchers a means for describing relationships through words, numbers, graphs, or charts that are generated from multiple scores calculated from large data sets (Fraenkel & Wallen, 2009).

In qualitative studies, the concept of triangulation supports reliability and validity to ensure viable results (Creswell, 2013). Multiple sources of data were collected and analyzed, providing for methodological triangulation. Findings from each data set were compared to each other to locate either patterns or inconsistencies within the data as the research questions were answered. These data were analyzed in order to answer the following qualitative research questions:

RQ_2: How do opportunities to observe, to reflect upon, and to discuss videos of classroom interactions affect elementary TCs' observations of and reflections on local classroom interactions?

RQ_3: In what ways do observation skills and knowledge transfer from VGR (incorporation of classroom videos for observation, structured observation protocol, in-class debriefing conversations) to nonstructured observation events?

Findings

RQ_1: Is there a difference between teacher candidates' observations skills and knowledge transfer from video observation to observations in the field when candidates are exposed to the VGR (incorporation of classroom videos for observation, structured observation protocol, in-class debriefing conversations) model?

An independent-samples t test was conducted to compare the observation protocol rubric scores completed during the field observations. There was significant difference in the scores for the VGR group ($M = 2.29$, $SD = 0.46$) and control ($M = 1.75$, $SD = 0.5$), $t(-2.17) =$, $p = .03$. The magnitude of the differences in the means was very large (Cohen's $d = 1.09$). Consequently, H_0 was rejected.

Additionally, when looking at the strength of the relationship between last video protocol observation (Protocol 4) versus live classroom observation protocol (Protocol 5) in the VGR group, there was a correlation of .40. This shows a medium positive relationship between the two protocols. TCs in the treatment group are able to maintain a consistent rubric score when observing videos as compared to observing in live classrooms.

RQ_2: How do opportunities to observe, reflect upon, and discuss videos of classroom interactions affect elementary teacher candidates' observations of and reflections on local classroom interactions?

Table 1. Overall Practicum Reflection and Final Exam Results.

Category	Reflection		Final exam	
	VGR group	Control group	VGR group	Control group
Classroom Management	25.26%	47.97%	20.86%	30.51%
Student/Teacher Interactions	25.56%	22.76%	28.78%	15.25%
Students	24.22%	13.01%	16.79%	25.42%
Teacher	24.66%	16.26%	33.57%	28.82%

Note. These numbers represent the percentage of the overall total from each group's coded responses to the reflection and final exam.

Both groups of TCs completed a final practicum reflection essay in which they discussed the overall practicum experience focused on what TCs learned from their observations. All TCs were able to reference observation notes they had taken over the semester. The treatment TCs were also able to access the treatment videos. Results indicated that all TCs, regardless of group, focused on the four main categories described in the analysis section: *teacher, classroom management, students*, and *student/teacher interactions* (see Table 1). Within both groups, the overall tone of the comments was positive as TCs commented on the observed behaviors of the teachers and students.

Control group

In the reflections of the overall practicum experience, the control group overwhelmingly discussed *classroom management* (47.97% vs. 25.26%) (see Table 1). The control group tended to write succinct descriptions of observable management behaviors in the classroom. For example, one teacher candidate described the discipline chart, "For discipline, the teacher had a 'blurt chart' where the children would put volcanoes beside their name if they called out an answer without raising their hand," while another described the reward system: "Students had tickets to earn during the week and when they were bad, which in the short time I was there, there were only two incidents, they would have to undergo some type of punishment." Other TCs discussed cueing methods. According to one teacher candidate, the teacher "used a couple different cueing methods to get her students' attention." Another teacher candidate described a specific cueing method, "If the teacher was talking or giving directions and the students started to talk over her, all she had to do was point to her ear and say 'Listening ears.'"

VGR group

The VGR group, in contrast to the control group, was more likely to talk about the categories *student/teacher interactions* (25.56% vs. 22.76%), *students* (24.22% vs. 13.01%), and *teacher* (24.66% vs. 16.26%). Comments related to *students* were typically detailed and centered on instruction. Some examples of

these comments include the following. "Each student solved their problems, and found the corresponding egg. Then we all came back inside to count the loot inside their eggs. Overall the students did very well with their subtraction, but we noticed a few students couldn't find eggs with the numbers they had come up with because they did their subtraction wrong."

Another teacher candidate commented, "The students split up into their assigned groups to complete independent work, and rotated going to work in small reading groups with the teacher." Sometimes the VGR group commented on how the *students* performed in groups. For example, one candidate wrote the following:

> One thing I noticed during my observation was that the students worked better in groups when they were not paired with their friends. The students who were paired with other students that they were close to, did not seem to accomplish their assignments as fast as the other students.

The VGR group also discussed the *student/teacher interactions* more frequently than the control group (25.56% vs. 22.76%). One teacher candidate wrote, "Ms. Jacobs is a very nurturing teacher and I noticed that she really put effort into positive interactions with individual students." Another teacher candidate commented:

> I could see the students trusted and respected their teacher. Often, students raised their hand to tell a story or share something with their teacher. She responded positively and as long as it did not interrupt her lesson, welcomed what they wanted to share.

Additionally, the VGR group discussed the learning environment as part of the *student/teacher interactions* category. As viewed by one teacher candidate, "[T]he classroom environment was fun but orderly…The values in her classroom are spelled out and clear to the students; they know to abide by them." When discussing the learning environment, the VGR group typically provided rationale supporting their comments. For example, one teacher candidate noted that

> the classrooms were set up differently, to allow for a different style of learning. In the math and science room students had their desks set up in rows, [and] this allowed them only one partner but mostly promoted individual learning. There were group exercises but for these the students got out of their seats and the group activity was short. However in the language arts classroom the desks were setup in groups of four, island style. This prompted the students to work in groups.

RQ₃: In what ways do observation skills and knowledge transfer from VGR (incorporation of classroom videos for observation, structured observation protocol, in-class debriefing conversations) to nonstructured observation events?

Exams

For their final exams, both groups of TCs viewed the same video and wrote about what they observed. As was the case with the practicum reflection, results indicate that all TCs, regardless of group, focused on the four main categories described in the analysis section: *teacher, classroom management, students*, and *student/teacher interactions* (see Table 1). Similarity, within both groups, the overall tone of the comments was positive.

Control group

The control group was more likely to make comments associated with the *classroom management* (30.51% vs. 20.86%) category. As was the case in the practicum essay responses, the control group's comments reflected an overall positive tone but lacked the extension seen in the VGR group comments. For example, one teacher candidate wrote, "The students knew to keep their hands raised and wait to be called on," while another teacher candidate wrote, "I noticed that Ms. Berry used to get the attention of her class and transition back to a class discussion was by saying '1, 2, 3, eyes on me' and the class would say back '1, 2, eyes on you.'" These *classroom management* responses were succinct and clearly linked to observable behaviors.

Control group members were also more likely to make comments related to the *students* category (25.42% vs. 16.79%). When reflecting on specific student behaviors, comments were succinct. For example, one teacher candidate wrote, "At the end of the video the small groups all got up and told the overall class the main idea of their groups." Another teacher candidate wrote, "After they read they again came up with a main idea. They shared their answers in front of the class and the groups with the same stories compared their answers."

VGR group

Analysis of the exams from the VGR group revealed that these candidates more frequently made comments associated with the *teacher* category (33.57% vs. 28.82%). These comments were highly detailed and overwhelmingly positive. One teacher candidate commented, "Ms. Berry does an excellent job reinforcing how to find a main idea by discussing as a class, letting the students work in groups, and talking to her students to hear what they are thinking." Another teacher candidate commented, "I love how she complimented her students on their thoughts and ideas and encouraged everyone to share, saying 'I want to see some new hands,' implying that the same few students were answering her questions and she wanted a few new students to share as well."

VGR TCs were also more likely to comment on *student/teacher interactions* (28.78% vs. 15.25%) and extended those comments beyond simple descriptions. For example, when commenting on *student/teacher interactions*, a teacher candidate wrote, "The way that the students interacted with Ms. Berry it was clear that they liked her. They did not hesitate to answer her questions. When she corrected them, the students took it with stride and rearranged their answers." Additionally, TCs commented on the learning environment and organization of the classroom within this theme. For example, one teacher candidate wrote:

> Although her classroom was small, I thought it was very well organized for student learning. She had the students' desks organized in groups so the students could interact and work together. She also had many academic resources around the room and on the walls.

Debriefing sessions

The debriefing sessions only occurred with the VGR group, as part of the VGR model. In the first debriefing session, 11.42% of responses were coded as *classroom management*. Approximately 26% of the debriefing codes focused on *student/teacher interactions* and 34% on the *students* category. No discussion focused on the *teacher* category as the instructor kept guiding the TCs back to specific observation protocol items unrelated to the teacher category. Additionally, integration of technology was discussed heavily as this was a primary focus of the video and received 14% of the codes. In comparison, the data on the final debriefing session following live observations in the field yielded the following results: *Classroom management* was 40%, *student/teacher interactions* were 26%, and *students* were 18%. As in the first debriefing session, there was no discussion focused solely on the *teacher* category. See Table 2 for results.

As illustrated below in the excerpts from the transcripts, TCs in the first debriefing session responded with yes/no and simple descriptive answers. There were few details or examples from the video to support statements or to extend thoughts. Examples and extensions that were discussed were inserted by the instructor. In comparison, in the last debriefing session, TCs responded to questions and provided specific, detailed examples from

Table 2. Debriefing Results.

Category	Debriefing Session #1	Debriefing Session #5
Classroom Management	26.01%	40.00%
Student/Teacher Interactions	25.71%	42.00%
Students	34.28%	18.00%
Teacher	0%	0%
Technology	14%	0%

Note. These numbers represent the percentage of the overall total from each session's coded responses.

their observations to support their statements. The instructor contributed to the discussion by deepening the dialogue, as connections to future course-work and theory were included in response.

Debriefing session #1.

Instructor: All right, they were going to share opinions, and do what?
Studentv Talk
Instructor: Talk, work through things.
Student: and work together
Instructor: Okay, and work together. I think this, you think that, we're both on the same page. We come up with the same answer, then chances are that we are probably on the right track. If I say one thing, and you say another thing, then we need to go back and do what? What do you think he probably did when he paired the children together? What do you think he might have considered?

Debriefing session #5.

Student: Um, I thought it was really good climate in the classroom. Like the teacher…it was like the kids definitely chose … enjoyed the teacher, like she was their friend for sure, like they were comfortable talking to her, but they also understood when they had to be silent, when people were working…
Instructor: And…
Student: There was a lot of respect, like they knew their relationship to each other.

Discussion and conclusions

The present study provides important insights into the benefits that teacher-education programs and their candidates can derive by employing a structured, supported video model in early field experiences. While the control group of TC exhibited some development, the TCs who participated in VGR demonstrated significantly greater growth than their non-VGR classmates. These differences were most obvious in three areas: the ability to focus on salient features of classroom interactions, the ability to identify the complexity of classroom interactions, and the ability to readily transfer observation skills from a video platform to an in-school platform.

Focus

When observing classroom interactions that occurred across the semester, whether those observations were offered via video or in the field, the VGR group TCs moved beyond the common practice of commenting on classroom-management strategies and students and instead focused on more complex and less obvious aspects of classroom life: teacher actions and the interactions between students and teachers. At the end of the semester when TCs took their final exams, candidates in the control group were still prone to comment on classroom management and students. In contrast, VGR TCs were more likely to make comments on teacher actions, student/teacher interactions, and subtle, more nuanced moves enacted by the teacher. Because the VGR group had spent considerable time during the semester observing videos, completing observation protocols, and debriefing about the classroom interactions in a structured guided observation approach, a common language and established set of topics had been defined and developed. While classroom management was discussed in the final exams, this was not the dominant focus of the VGR TCs' comments. Rather their extended statements focused on the teacher and student/teacher interactions. Having not participated in such a targeted model, the control group often confined their comments to obvious elements in the classroom and failed to acknowledge more subtle features.

This pattern of reflecting on the visible repeated itself in the reflection on the overall practicum (see Table 1). In these findings, 48% of the comments made by the control group were about classroom management; other categories were mentioned much less frequently. Conversely, the VGR group had an even distribution of responses. These results illustrate that the VGR group was more aware of the different components of a classroom, both visible and subtle, and was more able to discuss these when they were observed in the field. In essence, VGR TCs were able to recognize representations and to decompose them to some degree (Grossman et al., 2009), an ability not reflected in the majority of control group responses.

Complexity

The findings also illuminate that across the 16 weeks of the semester TCs in the VGR group developed a greater level of complexity in their descriptions of classroom interactions. In Debriefing #1, the VGR group frequently employed yes/no answers with limited responses, and the instructor did the majority of the talking and spent time pointing out examples and explaining the different components of the observation protocol. In contrast, late in the semester, during Debriefing Session #5, the VGR TCs provided highly detailed examples of events that they had seen in their

live observations in elementary classrooms within various schools without the support provided earlier by the instructor. TCs no longer required the instructor to identify important classroom occurrences *for* them; instead, TCs readily identified, provided examples and discussed the occurrences *for* the instructor and their classmates. The instructor's responses reflected one's changed position in the discussion: the instructor had moved from leading the conversation to posing probing questions and making links to research only when needed.

Furthermore, on the final exam, the VGR group demonstrated a higher response rate in each of the themes compared to the control group. In addition to the greater frequency of reflecting on the various categories, the VGR group also provided examples from both videos and the classroom observations to support many of their statements. In some of the categories, the raw number of responses was lower when compared to the control group, but the complexity and length of responses were greater. This finding supports Santagata, Zannoni, and Stigler's (2007) conclusions that by providing a specific framework to guide their observations, the TCs' comments on the video move from simple descriptions of teaching events to descriptions of the effects that instruction had on the learner.

Transfer

The final exam for the early experience course required TCs, regardless of their group affiliation (control or VGR), to view a 28-minute video of an elementary classroom and to compose a written reflection on what they had observed. Data from that exam illustrate that VGR TCs were more likely to comment on essential aspects of educational settings (student/teacher interactions and teachers) and appropriately utilize and apply specific vocabulary from the observation protocol. In addition, t test results for Observation Protocol #5 demonstrated a significant difference between the comments related to observation skills and knowledge transfer made by candidates in the control and VGR groups on their Observational Protocol #5 in the field. Thus, TCs who participated in VGR prior to observing in the field were able to reflect at a deeper level in each of the four categories on the observational protocol: learning environment, engagement, deepening thinking, and subject specific pedagogy.

Finally, the TCs' performances on these assessments indicate that watching four videos of classroom interactions, completing four observation protocols, and participating in five in-class debriefing sessions led by a supportive instructor increased these candidates' abilities to identify, in more complex terms, important aspects of teaching practice (Grossman et al., 2009; Sonmez & Hakverdi, 2012) and, perhaps most importantly, allowed them to transfer early course learnings, specifically observation

skills and a defined focus on meaningful classroom components, to their culminating field observations.

Conclusion

This research examined the ways in which TCs responded to a highly supportive, structured, and multifaceted observation model in an early experience course. The VGR process provided the space, active support, and low-risk environment necessary for conversations on representation and decomposition of teaching practices (Grossman et al., 2009; Schön, 1987) to occur before the TCs observed actual classrooms. These findings align with studies that assert that TCs must be guided through early observation experiences in order to be able to *see* classroom events as a practicing teacher might (Greene, 2009; Hult & Edens, 2001; McDevitt, 1996). From the selection of the videos to the postobservation debriefings, when TCs are provided with structured observation protocols, the VGR model focuses attention on concepts that are central to effective observation. Thus, strategic video selection coupled with purposeful questioning of the observation protocol proved to be critical components in supporting a focus on the salient observation concepts within an early experience course.

The degree to which the VGR TCs transferred observational skills and pedagogical knowledge gained from viewing, analyzing, and discussing videos to observing classrooms in the field and then to a nonstructured observation event suggest that this model builds a foundation of conceptual understandings of professional practices for these TCs early in their program of study. Consequently, as Video Grand Rounds TCs move to the next phase of their education program, supervised fieldwork, they take with them established observation skills in which they recognize representations of practice and are able to decompose those complex practices.

Structured use of effective videos in early field experiences speaks to a number of issues currently plaguing teacher-education programs: the difficulty of large programs to identify in-school placements for early field experience teacher candidates; the fluid, idiosyncratic nature of classroom activities and schedules; and the lack of a common text serving as a focus for shared discussion. Models like Video Grand Rounds reduce the amount of time that TCs need to spend in school classrooms and, based on the results of this study, appear to enhance the TCs' abilities in early field experiences to identify and focus on complex interactions that are central to teaching and student learning and to transfer what they have learned through video observation to classroom settings. As video observations become integral parts of an increasing number of teacher-education programs, the potential exists for the construction of a collaborative warehouse

of teaching videos to support all early experience teacher candidates as they build their skills and knowledge through consistent, collaborative interactions.

Future directions for research include a longitudinal study on the participants of this Video Grand Rounds experience, as they move through their remaining coursework and internships to address the question of whether VGR has long-term impacts on a TC's performance. Additionally, the VGR method could be examined in terms of types of video selected and the impact of varying modes of delivery (i.e., online, face-to-face, higher level field experience coursework). A new question emerges: How do we best maximize VGR?

Note

1. Pseudonyms are used for all names.

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Appendix A

Observation Protocol

Note. The Classroom Observation Protocol has been formatted for electronic access by through the College of Education undergraduate TASKSTREAM Web-based tool and teacher candidates are expected to record their observations using the TASKSTREAM tool. The protocol will focus on three areas: (a) Context for Observation, (b) Learning Environment, Engagement in Learning, and Deepening Thinking, and (c) Subject-Specific Pedagogy.

Context for Observation Information

Setting: Video ID Observed: _____ OR School Observed: _____ Grade: _____

Instructional Content Focus: _____ Student Learning Activities: _____

Learning Environment, Engagement in Learning, and Deepening Thinking

For each of the following Learning Environment, Engagement in Learning, and Deepening Thinking characteristics, indicate whether you observed each. Then describe what you observed on the part of the students and teacher in the "NOTES" section. Complete this section of the protocol by summarizing what you observed.

	Yes	No	NOTES
Organization Was the classroom well organized for learning?			
Did students know classroom routines?			
Were transitions handled smoothly?			
Affective Quality of the Classroom			
Did you feel students and the teacher had a positive relationship with each other?			
Did students seem to like/enjoy/trust the teacher?			
Student Engagement in Instruction			
Were students attentive and "on task" throughout the lesson?			
Were students focused on what was to be learned?			
Monitoring of Student Performance			
Did the teacher monitor the performance of all students?			
Short Summary of Characteristics Observed			

Subject-Specific Pedagogy: ELEM

For each of the following Subject-Specific Pedagogy characteristics, indicate whether you observed each. Then indicate your thoughts on whether each was effective. Next, describe what you observed on the part of the students and teacher in the "NOTES" section and why you think it was effective or not. Complete this section of the protocol by summarizing what you observed.

Lesson Goals	Observed?		Effective?		NOTES
	Yes	No	Yes	No	
Could you determine what the lesson goals were from observing the lesson?					
Did the teacher share the content goals with the students?					
Lesson Introduction					
Was prior academic learning assessed to determine what students already knew about the topic?					
Did the teacher preview the topic (e.g., Today we're going to learn about… What I want you to learn is…?					
Instruction					
Did the teacher present information to be learned using examples, demonstrations, videos, pictures, graphics, etc.?					
Did the teacher model or provide "clear examples" of what was expected?					
Were students provided with ways to organize the ideas presented (time lines, charts, graphs, etc.)?					
Checking for Understanding					
Did the teacher ask questions to determine student understanding? Did questions go beyond just recall to include why questions and explanation questions?					
Guided Practice					
Did students have an opportunity to demonstrate understanding by working through an activity or exercise?					
Were students able to work with each other during a segment of the lesson?					

Did the teacher monitor what students were doing and helping those that needed assistance?					
Did the teacher monitor and document student learning during the independent practice?					
Closure					
Was anything done to help students make sense of what was taught or synthesize					
learning (e.g., reinforcing major lesson points, conducting an informal assessment, asking students to describe what they had learned)?					
Short Summary of Characteristics Observed					

Appendix B

2123 Final Exam

Part B

After reviewing the Context for Learning information and viewing the video of classroom teaching, describe and reflect on what you observe in the video. Submit your observation description and reflection below.

Your instructor will provide you access to the Context for Learning information and a link to the video.