

Learning through a lens

Classroom videos of teachers and students prove to be a powerful professional learning tool

BY JOAN RICHARDSON

uring a videotape of a classroom lesson, one student consistently had his hand up, vying for the teacher's attention. But teacher Becky Hinson never called on the student.

"I didn't see him while I was teaching. If you had told me that, I wouldn't have believed it. But, there it was on tape," she said.

Hinson taped herself teaching as part of the portfolio she created while seeking certification from the National Board for Professional Teaching Standards.

"Videotaping myself teaching was one of the most worthwhile experiences I had. You see yourself doing things that you don't know that you do," she said.

Now, as a curriculum coordinator at Green Sea Floyds High School in Horry County, S.C., Hinson encourages others teachers to tape themselves and teams of teachers to view videotapes of exemplary instruction as a way to learn more about how to improve their own teaching practice.

Using videos as a professional development tool is growing in popularity as

videocameras and video playback machines have become ubiquitous in schools across the nation. Numerous commercial ventures have sprung up to offer videotapes to schools and many school districts have taken videocameras into classrooms to create their own videos of exemplary instruction.

With the popularity of
YouTube and the ease of posting
videos online, educators can be certain that
video will become even more widely used. But
ensuring that videotapes are used as an effective
professional development tool requires far more

Continued on p. 2

WHAT'S INSIDE

The Value of Video
Page 3

Guiding
Questions for
Analyzing
Classroom
Lessons
Page 4

Tips to Improve Video Quality *Page 5*

Tips for Recording a Small Group Page 5

Tips for Recording a Whole Class Page 5

Video Analysis Questions Page 6

Analyzing Videos Page 7

Video Analysis Into Practice: Course of Action Form Page 7



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Classroom videos are a powerful professional learning tool



"Videos allow the observation of teachers and students and videos allow that observation to take place in a way that can be reviewed time and time again and studied. They can be incredibly power learning tools," said Curtis Linton, executive producer for School **Improvement** Network/Video Journal.

Continued from p. 1

than just sitting teachers in front of a television.

"Videos allow the observation of teachers and students and videos allow that observation to take place in a way that can be reviewed time and time again and studied. They can be incredibly power learning tools," said Curtis Linton, executive producer for School Improvement Network/ Video Journal. Now in its 16th year of operation, Video Journal has been in well over 1,000 schools and taped more than 3,000 teachers.

"So much of professional development has relied on workshops and books. The limitation for both of them is that they're devoid of students," he said.

Sandi Everlove, chief academic officer for TeachFirst, said observing teachers in action is essential for getting a clear picture of good instruction. "But it's not feasible for us to have lots of teachers take time off to go and watch other teachers teach. But it is feasible to videotape good teachers teaching and share those videos with others and talk about what works and what doesn't work," said Everlove whose company uses videotapes in its work to develop professional learning communities in schools across the country.

Linton believes videotaped observations offer many advantages over traditional in-person observations. "Classroom observations don't allow observers to back up and review what they've seen. That means the discussion is only as good as your memory and your notes. A video is a visual record of what's actually gone on," he said.

For videos to be effective professional development tools, however, requires that educators look at and discuss the videos with colleagues. "When it's watched with a colleague, they can really unpack what they saw going on in the video," Everlove said.

Jim Stigler, professor of psychology at UCLA, has used videotapes to study teaching throughout his career, including his work as a principal investigator for the TIMSS project, agrees with Everlove. Teachers cannot learn simply by watching another teacher "doing it right. ... No one can learn that way," he said.

The learning occurs because of the analysis and discussion that follows the watching of a videotape, he said. To deepen the learning, Stigler said teachers should put their learning into action by planning and delivering lessons. Then, and only then, he said, should they consider videotaping their own instruction for study.

Stigler believes teachers should first learn how to analyze videos before they videotape themselves teaching. "Looking at yourself is very threatening. You want to develop your analytic skills in situations that aren't so threatening," he said.

In addition, Stigler is skeptical about the value of a teacher watching his or her own practice on tape. "If you videotape the way you teach, you're not going to learn a new idea. Even after you start looking at yourself, you can still have blindspots if you don't have colleagues sitting there with you while you're viewing the videotape and critiquing your teaching," Stigler said.

Linton sees similar challenges with videotaping peers in the building. "What gets videotaped and shared may be common practice rather than best practice," he said.

Everlove said she has learned that schools must have high levels of trust before colleagues can effectively critique each other's teaching. "If that person on the video teaches in my building, I am far less comfortable critiquing that person. Viewing videos of teachers who are not in their building, maybe not even in their district, frees teacher to go deeper into their analysis," Everlove said.

Self-videotaping can be helpful if teachers have a clear purpose for why they are videotaping themselves, Everlove said. For example, teachers might watch a video of themselves to gauge their wait time during lessons or to see how successful they've incorporated a particular strategy into their teaching.

When it's used correctly, Everlove believes videos have the power to transform thinking and practice. "If every teacher in the U.S. were to film themselves for an hour and calculate the number of minutes they were talking and the number of minutes that kids were talking, we might start an educational revolution in this country," she said.

THE VALUE OF VIDEO

ne of the best known videotaping efforts was the work done by Trends in International Mathematics & Science Study (TIMSS), a cross-national study of 8th-grade mathematics and science teaching. With the videotapes, TIMSS researchers were able to give American teachers a window into the normal routines of regular classrooms in other countries and show the difference in instruction between nations.

Jim Stigler, director of the TIMSS video studies and now CEO of Lesson Lab, a commercial venture that markets the use of the TIMSS videos for professional development, believes there are three primary outcomes that educators can expect from studying videotapes.

Develops a shared language about instruction.

Stigler believes that a group observation is essential. "This is really critical. Instead of talking about instruction in the abstract, teachers can actually point to an example in a video," Stigler said.

Watching and discussing a video together can point up differing ideas about key instructional issues, he said. For example, several teachers in the room might believe that they incorporate problem solving into their instruction. By viewing a videotape, they might realize that they have different views of exactly what problem solving means in a classroom situation. That could lead to a further discussion and clarification about what is and is not problem solving.

Teachers are not the only ones who need this shared understanding. In the Horry County district in South Carolina, one of the TeachFirst districts, the administrative team watches videotapes at each of its meetings as a way to develop a consistent approach to evaluation. "We wanted to make sure that we had the same idea not 75 different ideas. Teachers get confused when different evaluators see different things. We were trying to get everybody on the same page about what is exemplary," said Charles Collins, principal of Green Sea Floyds High School.

To assist any videotape conversation, Sandi Everlove from TeachFirst recommends designing a facilitator's guide for each video that's viewed. See Pages 5 and 6 for sample questions that could be used or adapted for viewing a videotape at your school.

Allows teachers to view instructional strategies that they have not seen before.

The TIMSS videos showed that there is a lot of homogeneity in instructional practices within a country. In other words, teachers in any given country tend to teach in much the same way. "If you want a new idea, it may not come from watching your colleague down the hall," Stigler said.

"It's very helpful to study videos from other cultures, provided that teachers know the reason they're studying them is not to copy but to learn about a different way of teaching," Stigler said.

Enables teachers to analyze teaching and learning as a situation of cause-and-effect.

Videotapes can be especially good at enabling observers to watch both the teacher's instruction and the student responses. "You want them to shift their focus from the teacher to the student. You want them to look at the lesson from the student's point of view," Stigler said.

"You want teachers to look at a classroom lesson and say 'I don't think that student understood the question that the teacher asked. Look at his face. Listen to his answer. I wonder why he did that. Maybe it's the way the teacher phrased the question. Maybe the teacher didn't provide enough time.' Questions like that leads to thinking about what you can change about instruction and how it can make a difference in what the student learns," Stigler said.

"This thinking analytically is the most powerful mechanism for improving teaching," he said.

Stigler said teachers who appear on videotapes don't necessarily have to be exemplary teachers but they should be good teachers. "You don't learn a lot from pointing out the errors of bad teachers. The point is to develop your analytical skills, to analyze teaching and identify strategies," Stigler said.

NSDC TOOL

For more information about Lesson Lab, a Pearson Education company, visit www.lessonlab. com.

For more information about The School Improvement Network/Video Journal, visit www.school improvement.com.

For more information about TeachFirst, visit www.teachfirst.com.

Guiding Questions for Analyzing Classroom Lessons

1. THE LESSON

- What is the content of the lesson?
- What are the parts of the lesson? How are they sequenced and organized?
- What materials are used, and how?
- What is the teacher's role in the lesson?
- What is the students' role in the lesson?

2. THE TEACHER

- What is the teacher's goal? What does she want students to learn?
- What are the teacher's beliefs about the subject matter, the way students learn, the process of teaching, etc.?
- What is the teacher's theory of teaching?

3. THE STUDENTS

- What expectations do students have? What skills/knowledge do they bring to the lesson?
- What are students learning from the lesson?
- How might learning experiences differ for students of different backgrounds or levels of preparation?

4. THE SYSTEM

• How do the parts interrelate? What are the dependencies?

5. THE CONTEXT

- What are the other factors, broadly defined, that impact on the lesson?
- What parts of the lesson would work differently if these contextual factors were different?

Source: Jim Stigler. Used with permission.

Tips to Improve Video Quality

- If possible, use a tripod. A fixed position will eliminate the most obvious problem of video quality, namely the wobbly effect of an unsteady hand.
- 2. If chalkboard writing is important to the lesson, be sure that it is captured on the video recording and is legible. This may require refocusing the lens on the board. In addition, sometimes writing is legible to the eye but not to the camera. You may have to move the camera to reduce the amount of glare on the board, or use dark markers on chart paper taped to the chalkboard.
- 3. In general, the camera should be pointed at the speaker. That is, when the teacher is speaking, the camera should be aimed at the teacher. When students are speaking, the camera should capture them. This general principle will be difficult to achieve, however, if the camera is positioned at the back of the room. A side position will be more effective.

- 4. Set the zoom lens to its widest setting if it is necessary to move the camera while recording.

 This will cut down on the shakiness of the recorded image.
- 5. Increasing the amount of light in the classroom will improve the video recording. Therefore, be sure to turn on all the lights and, if possible, open your curtains or blinds.
- 6. If you are using an older camera, you may have to adjust it for the light source each time you shoot. Newer cameras, however, may have a switch for recording in incandescent, fluorescent, or daylight, or may be completely automatic.
- **7. Avoid shooting into bright light.** If there are windows on one side of the classroom, try to shoot with your back to the light.

Tips for recording a small group

The following are recommendations for video recording small group work such as discussions among students or students working on a project together.

Camera placement. If you can plan ahead and determine the group of students that you will video record, it is optimal to place the camera on a tripod at one point in the group of people. Alternately, the camera can be hand held and/or braced against a wall to steady the view.

The camera should be a distance away from the group and show as many participants as possible. Viewers will want to see the facial expressions of students and to understand

how you work with them. Be sure that the people who are interacting in the small group (both you and your students) can be seen and heard.

If the group is looking at or referring to an item,

zoom in at the beginning of the conversation and maintain a close focus long enough for viewers to understand the ensuing conversation. Then, zoom out and keep the lens set wide.

Microphone placement. Carry the external microphone so that it is always closest to you and to the group with whom you are interacting. It is essential for viewers to clearly hear the participants' conversations.

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TIPS FOR RECORDING A WHOLE CLASS

The following are recommendations for video recording whole class teaching activities such as demonstrations, discussions, etc.:

Camera placement.

Place the camera on a tripod at the side of the room, and if possible, set it up high on a counter or table.

Set the lens to a wide angle. Viewers will want to see both the teacher and the students together, how students react, and to see their engagement in learning.

Avoid trying to follow a conversation back and forth between different people. You'll find that the camera always arrives late to the action.

Microphone
placement. With
masking tape, firmly
attach the microphone up high on
the front wall or on
any other flat
surface that faces
most of the
speakers.

NSDC TOOL

Video recorded teaching sessions offer particularly strong evidence of a teacher's knowledge and ability.

These questions were designed to focus attention on aspects of teaching that are described by the National **Board for Professional Teaching Standards. NBPTS recommends** that teachers going through its certification process use these questions to hone their skills as an observer and analyst of their own teaching. However, these questions can also be useful in guiding discussion of video recordings of other teachers.

Video Analysis Questions

- 1. What is the extent of classroom involvement (e.g., are the same students doing all the talking)?
- **2** Are the students engaged in the lesson? How can you tell? What do students' facial expressions and body language tell you about your instruction?
- **3.** What kinds of questions do you ask? Can all questions be answered with a single word? How long do you wait for responses? Do you ask students to explain and/or defend a particular answer or approach? Do you ask students to compare or evaluate alternative interpretations or strategies?
- **4.** Were there any opportunities for students to ask questions? How would you categorize the students' questions (e.g., did they indicate confusion and a need for clarification or understanding and extension)?
- **5.** What roles (e.g., expert, facilitator, co-learner) did you play in the video recording? Was each role appropriate for the situation?
- **6.** What kinds of tasks did you ask students to do? Did you capitalize on their previous knowledge and experiences?
- **7.** What instructional opportunities did you take advantage of? Why?
- **8.** What instructional opportunities did you not take advantage of? Why?
- **9.** What evidence did you see of the students taking intellectual risks? Does the climate of the classroom provide a safe environment for getting something wrong? Do students talk to each other as well as to you?
- **10.** Do you encourage students to take risks, to speculate, to offer conjectures about possible approaches, strategies, and interpretations?
- **11.** Were the learning goals for the lesson achieved? Did you adjust the lesson so your goals could be achieved by every student? What is the evidence for your answers, both in the video recording and from other sources?
- **12.** Explain how your design and execution of this lesson affected the achievement of your instructional goals. (Your response might include but is not limited to such things as the anticipation and handling of student misconceptions, the unexpected questions from students, the unanticipated opportunity for learning that you captured, or your planned strategy and its outcomes in the lesson.)

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Analyzing Videos

- A. Review your video recordings, keeping the Analysis Questions on Page 6 in mind. You may want to watch the videos several times. Watch each recording with the sound turned off. This should give you greater awareness of your and your students' nonverbal behavior, such as facial expressions and body language.
- B. Twenty-minute video recordings will be sufficient for your analysis. Select several of your video recordings for analysis, keeping in mind the suggestions about representing multiple class sessions and course offerings. All video recordings should be continuous and unedited.
- C. After you have chosen the video recordings that you will use, answer the "Analysis Questions." Your responses should be straightforward and written in non-technical language.
- When you have finished answering the questions, review your writing. Read through what you have written with as fresh a view as possible. Imagine as you read that you do not know anything about the unit or the students you have selected. Is your writing clear? Can you follow your thinking?

Video Analysis Into Practice: Course of Action Form

Based on the video that you just viewed, identify two specific areas in your practice that you want to improve or further develop and address how you will achieve your goal.

AREA 1	AREA 2
Identify an end goal (i.e., what you would want to see in your practice as evidence of development).	Identify an end goal (i.e., what you would want to see in your practice as evidence of development).
How will you reach this goal?	How will you reach this goal?

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NSDC TOOL

STAGED OR NOT STAGED?

Not staged. "One of the authentic things about teachers is their capacity to deal with what goes on in classroom, with the things that you can't predict. When you manufacture a false arena, teachers watching it know it's staged," said Sandi Everlove, chief academic officer of TeachFirst.

BUY VIDEOS OR MAKE YOUR OWN?

Learn by using others' videos first.

If your budget is large enough or if you can tap into the resources of your school district's video department, then you can start making your own videotapes.

HOW LONG?

Edit it down to 20 minutes — maximum. "People get bored watching 90 minutes of instruction," said Curtis Linton, executive producer, School Improvement Network/Video Journal.

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different person as a result

of what I learned at NSDC. I

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