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AUTHOR Gardner, C., H.; And Others
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ABSTRACT

The classroom behaviors recorded during three second grade reading lessons provide suitable evidence for comparing the relative merits of using narrative observations versus videotapes as data collection techniques. The comparative analysis illustrates the detail and precision of videotape. Primarily, videotape gives a true picture of linear time, while narrative observation creates the impressions of time "densities," when time seems to speed up or slow down depending on the pace of events and their description. The videotape also records the exact sequences of verbal and nonverbal events, which classroom observers cannot always do. In contrast to videotape recordings, the narrative observer will always have a wider angle of vision than the video camera, viewing a number of events at the same time while recording one particular event. The experienced narrative observer also brings to the classroom a sense of "history" and context that the camera does not have. The observer can usually evaluate intensity and saliency at the time of the event better than a videotape can show later, and is better able to focus on particular students without losing view of the class as a whole. (RL)

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Comparing Videotapes and Written Narrative
Records of Second Grade Reading Classes:
Selecting Methods for Particular Observational Goals

C.H. Gardner, R.O. Clements & M. Rodriguez

Research and Development Center
for Teacher Education

The University of Texas at Austin

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Comparing Videotapes and Written Narrative
Records of Second Grade Reading Classes:
Some Preliminary Findings

C.H. Gardner, R.O. Clements & M. Rodriguez

During the school year 1978-79, the Dimensions of Classroom Instruction Project of the Research and Development Center for Teacher Education at The University of Texas conducted a study of nine second grade reading classes in three small town schools. The purposes of this study were (1) to compare three observation methods: videotaping, narrative observation, and a quantitative observation technique; and (2) to carry out a substantive study of reading instruction/learning at the second grade level. The purpose of this report is to describe a preliminary comparison of three of the written narratives of one of the observers who carried out the classroom observations with the videotapes made in the same classrooms at the same time.

The narrative observers visited their respective classrooms twice a month for six months to observe the reading instruction period, usually 1 1/2 to 2 hours. During four of these periods, videotapes were also made, using two manually operated cameras, 4 to 6 microphones, and a switcher/mixer console at a remote location. The videotapes are 60 to 90 minutes long, depending on the length of the total period. Camera operators and observers had received basically the same instructions before going into the field regarding their focus of attention, to insure, insofar as possible, that they would be "looking at" the same things. They were instructed to focus on the teacher and the reading group, but to try to convey a sense of the activities of the rest of the class whenever possible.

The comparison was made by the simple procedure of watching a videotape with the observer's narrative at hand, starting, stopping, and replaying the

tape, and assessing the agreement or nonagreement of each event as seen by the camera and/or described by the observer.

Of course, some unavoidable disagreements about events will be attributable to the different locations in the room of the observer and the cameras (although their different locations also frequently allow the two records to enhance each other). Of more interest to us in this comparison, however, are the differences that are attributable to the nature of the method itself. As Decker (1975) points out, "The narrow angle of vision of the camera lens, as compared with the human eye, has an important influence on the cinematographic recording of any event.. It immediately focuses the attention on a smaller field of vision..:" and "...the minutiae of the event can be fully analyzed from such a film." While this intensity and narrowness of focus has its obvious advantages, we must compare it at times with the wider perspective of the human observer to be sure that, as Decker (1975) puts it, matter that is excluded by the camera's narrow vision is truly "irrelevant."

Comparing videotapes with narrative descriptions of the same classroom also permits us to examine the possibilities and difficulties of Erickson's (1978) suggestions regarding "instant replay" as a "'folk' means of demonstrating validity and reliability in description." Two of the inherent difficulties in narrative description that Erickson identifies--the "speed of relevant action" and the "simultaneity of relevant action"--are of special interest when viewing videotaped events and reading a narrative description of them. In some cases, contrary to Decker's (1975) assertion, it is the video camera that provides the wider view and allows us to judge whether events omitted in the narrative because of the problems of speed and simultaneity are indeed "irrelevant."

The comparisons which follow are not intended to be exhaustive, nor are they intended to evaluate the relative quality of information recorded by each method. Mainly because of the limitations imposed by other parameters of the research project which collected these data, these comparisons at this point can only suggest some areas of particular interest when conducting more rigorous comparisons in the future.

Clearly, the more simultaneous means of observing a classroom we employ, the richer the information we obtain. But where observation is limited to one method, we must be fully aware of its merits and weaknesses. Comparisons such as the one that follows can contribute to that awareness.

Comparing Narratives and Videotapes of Three Classrooms

Teacher 05

Videotaping in Teacher 05's classroom began at 8:52, when the observer had already been in the room about half an hour. The scene opens with the camera focused on Teacher 05, who is standing in front of the room looking at the class. She admonishes Jimmy, whom we can't see. The observer's narrative tells us, however, what he was doing ("showing off, saying something about his leg"). The videotape and narrative agree on the interchange between them, except that the observer catches a bit of "backtalk" from Jimmy that is inaudible on the videotape. In this small scene the two methods are particularly complementary, providing a fuller picture than either one alone. As for what is lost by each, the video doesn't show Jimmy's behavior, which is probably not a great loss in view of the mildness of the teacher's reproach. The information conveyed by the narrative account of Jimmy's backtalk (inaudible on video) may be of more interest, however; the teacher says he should be "reading" to which he responds, "that's working."

For the next few minutes the observer and camera simply follow the teacher's movements, upon which they substantially agree.

After the teacher sits down alone in the reading area, the camera continues to focus on her while the observer looks around the room. The narrative tells us what students are doing (reading and handwriting) and their demeanor ("serious, business-like," "knit their brows," "very cool," "moves lips"). The camera finally pans the class slowly and confirms these descriptors.

The camera returns to the teacher, then pans the students again, and returns to the teacher. We see Harmony appear from off-camera, walk to look at the Learning Center assignment chart behind the teacher, and walk back off-camera. The narrative tells us that she collects her crayons and goes to the Create Center, which we do not see on video. The next sentence of narrative tells us that Jerry looks at the Center chart and goes to the Listening Center, although 1 1/4 minutes actually elapse on video between the two students' trips to the chart (video doesn't show his going to the Center). The video picture then becomes a split image, with the teacher sitting at her seat in the otherwise empty reading area, and a slice of the classroom showing five students at three tables working. This shot, although reasonably informative, is esthetically appalling, and is soon abandoned for a full-screen view of the students, still working quietly. The scene cuts to the teacher, and Teresa comes up to her. The period from Harmony's visit to the chart until Teresa comes to the teacher, about 4 1/2 minutes, is covered in 14 lines of narrative, which include the observation that Jimmy is "goofing off," which the camera fails to pick up. The narrative also tells us that students at Table 3 are beginning to move and talk. This is apparent on the videotape only from an increased noise level.

The narrative quotes the teacher almost verbatim in her response to Teresa's question (which neither video nor observer hear). The camera and observer agree on the next few events (visits to the teacher by two students to ask questions). The teacher then stands and asks for the attention of two of her reading groups. The narrative does not tell us that she asks the groups three times to put their pencils down and is distracted by (apparently) someone at the door for a second. (The teacher's manner on video during this change of activity is somewhat distracted in general--as if "pencils down" were a ritual expression that had more to do with the teacher making a mental transition from contemplating her lesson to the actual teaching of it than with students not attending.) The narrative tells us that the teacher has words on the board with "ex" prefix; the camera focuses on the words and, of course, we can read them. The narrative incorrectly names the first student called on to read a word from the board. A list of students follows in correct order, as they read each word, and the narrative tells us that the "teacher calls on students with hands raised, asks for meaning. Tries to construe their answers as correct, but expands if inadequate." This is an excellent narrative summary of the process characterized by this typical series of teacher responses from the video: "what does explore mean?...all right, a trip, but what else?...do you look for something?...Yes, 'search,' that's another good one." The narrative summary of these specific events provides an example of what Erickson (1978) calls "languages of description at the level of primary data collection which make contact with the theories of action that are being used in moment to moment decision-making by participants in the events we observe and describe." As illustrated here, use of such languages

of description avoids the pitfalls of speed and simultaneity of relevant action without damaging "descriptive validity" (Erickson, 1978).

Although the remainder of the videotape-narrative comparison follows the patterns described above, a few more salient events from Teacher 05's classroom will be compared just to illustrate the richness of this approach.

In a few moments the teacher tells the students to open their workbooks. As the teacher passes his desk the narrative tells us she takes Chad's pencil--"Do you have another? This is too small." The observer was behind Chad and either failed to see or omitted what the camera shows us. The teacher took another (longer) pencil from Chad's zipper case, put it in front of him, and threw the stub in the trash. The narrative observer could not see Chad's expression of disgruntlement, nor hear him say, as recorded on video, "I liked that one."

Throughout the narrative Jared received considerable attention from the observer. He is seated at a desk separate from the three tables, although he is a member of one of the three reading groups. Interactions between him and the teacher are always described in the narrative in some detail, although he is usually off-camera because of his isolation. At one point (on a different tape) we do see and hear a lengthy affective interaction between them--but when he returns to his seat the camera stays on the teacher. Only from the observer can we follow up on Jared: "Forehead on hand, brows knit, stares at his paper and fiddles with pencil." Four minutes pass before observer writes, "Jared has started writing." This time the student's frustration is, not seen on the videotape, in contrast to Chad's reactions which the camera could see but the observer could not. It should be pointed out that in the Chad incident the difference

between observer and camera is that of physical position, whereas in Jared's case the observer has chosen to focus on Jared for reasons that are not available or apparent to the camera operators.

Teacher 03

The camera is panning the classroom when Teacher 03, seated at the reading table, calls the reading group to come back with their reading books. Narrative: "They [students] race. Teacher [says]: 'slow down.'" This is captured perfectly by the camera, which tracks the students as they clamber out of their desks and rush to the reading area. The narrative lists the students' names in the order in which they sit in the semicircle. The narrative then tells us that "Teacher asks same questions as [with previous group] before." Since both groups are doing the same exercise, this should be legitimate shorthand for the narrative writer to use. Referring back in the narrative, however, we find "Teacher questions about story--what happened." This is true, although terse, and neglects to mention that the teacher goes around the circle with her eyes questioning students in turn. Video and narrative agree that "Students giggle, speak out," and that Betty interrupts teacher briefly. The narrative then tells us that the teacher is going down the row with her questions, which continue after Betty's interruption. The narrative doesn't mention an event we see on camera: Teacher reaches over and touches or restrains a student at the end of the semicircle nearest to the camera (the observer is on the other side of the room). The camera and narrative agree that the discussion ends with student comments, laughing, and teacher smiling, and that the teacher has the students open their books to page 185. The narrative here omits some student comments and a teacher "Shh."

We see the teacher initiate the next activity by calling on Ted to "read the first word," which the narrative also records. The narrative succinctly summarizes the flow of the lesson by observing that the students in turn "read 'their' word without further verbal instruction." Two events interrupt the lesson in rapid succession and the narrative totally omits the first: we see the teacher look over at the student nearest the wall and tell him not to touch "that microphone" and to move his chair up. (This is one of the few times in these tapes when the teacher's awareness of the video-audio equipment is manifest.) Immediately after this, we see the group and teacher respond to some music/noise from off-camera by looking toward the other side of the room, laughing, teacher smiling. The teacher tells someone to "go turn that thing down, she probably doesn't know its..." The students continue to laugh rather noisily. The narrative economically describes this event, and then the teacher's reaction: "Teacher has another student tell her to adjust it, ignores ruckus. Continues with words."

A bit of nice (or fortuitous) camera work follows which allows us to verify the observer's next reference to an individual student. Up to now the camera has focused on the teacher, with the backs of three students' heads in the foreground. As the teacher asks the group in general, "what would I be if you were my nephew," the camera swings from her to the students in the semicircle who were hitherto off-camera, and whose faces and profiles are towards the camera. Just as the narrative tells us "Jed answers right, seems pleased with himself," we see him answer, "aunt" and grin triumphantly around at his classmates. It may be that the camera operator was cued by the semi-personal nature of the question to anticipate more-than-ordinary animation from the group, and chose to shift focus from the teacher to the students whose faces would be visible as they answered. (It should be

needless to point out that this kind of anticipatory camera work illustrates the advantage of manned rather than static or remote-controlled cameras, and also, more importantly, will result in a more complete, more interesting, and more esthetically satisfying video record of the classroom [see Gardner, Miller & Clements, 1980].)

The narrative points out that "Students seem in good mood," which can be verified as the camera pans the group. We see the activity continue in the same vein to the end and the teacher immediately begins to pass out some large sheets of paper. The narrative gives us a time-line description: "After they read words, teacher begins passing out papers." On video we can still see a certain residual restlessness in the group. Tape and observer agree that the teacher says "'Anne, you settle down' (seriously);" the narrative's choice of "seriously" aptly describes the no-more-nonsense look on the teacher's face. In the next event we again see an example of the observer's ability to follow through with a student's (off-camera) response to a teacher's (on-camera) action. We see the teacher tell some "girls" (the narrative tells us their names) to go to their desks from the Center because they're "helping each other too much." The narrative and camera agree very closely on the teacher's words and expression, but the camera continues to focus on the teacher, while the narrative tells us how the two girls look after they reach their desks "Betty doesn't seem bothered, Cherry has head on desk."

Comparison of videotape and narrative of the remaining session with this reading group continues to follow the same pattern.

Teacher 04

As the videotape begins, teacher and three students are seated at a round table in a corner of the room. (For some reason, contrary to their

instructions, the camera crew began taping after the transition into reading, a few minutes before. This transition is timed and described generally ["a few questions during transition...generally quiet"] and specifically ["'Are we going to read today?' etc."] by the narrative.) The teacher is getting students to tell her ways you can fly over a city. The narrative tells us this, describes teacher as "animated," and says, "Students speak out, seem interested." Seven lines of narrative are used to describe this 1 1/2 minute discussion--although the narrative does not give any specific examples of the teacher's questioning style here, nor characterize it in general. Her style can be seen on tape to be simple and descriptive with this group: "What's the big round thing full of air...?"

The students begin oral reading and the narrative follows the action on videotape very closely, omitting only that after the teacher's prompt to Todd he gets the word himself, and that the teacher's question after Todd reads is directed by name at Neal and not to the group in general. When Nora, who is a very poor reader, begins, the narrative gives examples of the prompts the teacher uses (usually phonic, but also occasionally contextual, or she has another student read the word) and tells their resolution. Events are occurring slowly enough that the narrator has time to write a full, almost verbatim, account, which is substantiated by the videotape. However, the narrative does not mention a feature that is salient on the videotape: the impatience of Neal and Todd with Nora's "painfully" slow reading, and the fact that the teacher ignores the two boys.

As the reading group changes activity on tape, we see Todd reprimanded twice. The first time he says, "You're mean," to Neal because Neal "beat him" at reading the title of a story. The teacher says, "Todd," in a tone conveying mild disapproval. She then passes out worksheets and Todd shoves

Nora's rudely at her while she is still fumbling with her workbook. The teacher says, "Todd, just leave it; you can see she's trying to find her place in her book. That was not nice." Todd sits with downcast eyes, chin on chest. The narrative collapses these two reprimands into two lines: "Serious reprimand to Todd, did something teasing to Nora?" The words "serious reprimand" here fail to capture the domineering harshness of the teacher's tone and Todd's embarrassment, although they do tell us that Todd has received some unwelcome attention.

Again, as in the case of Teacher 05, comparing the two versions of the rest of the reading period yields the same pattern. Because Teacher 04 is more verbal than Teacher 05, we find more of a tendency for the videotape to fill in details of her conversation that go by too fast for the narrative writer. The position of this small group in the corner, Neal and Nora with backs to both cameras and to the observer, makes it impossible to know their expressions. The camera can see Todd from the side. The teacher is filmed face on, and this angle plus the inscrutability of the students makes the video viewer very aware of the intensity of her voice and expression (a case of Decker's [1975] "narrow angle of vision of the camera lens"). The narrative writer tells us about a few things that happen in the classroom-at-large, but they are not of great interest. In this case the narrow angle gives us the best view, although it sacrifices the children's facial expressions.

What Videotape is Good For

Primarily, of course, videotape gives a true picture of linear time. Although the narrative observer usually makes regular time notations in the margin, it is difficult to meaningfully relate those times to events described. It may take five lines of narrative to describe five seconds or five minutes in the classroom, depending on how "fast" things are happening. This gives

the interesting impression that time itself is speeding up and slowing down, whereas the video shows us time at its normal pace, and events occurring in clumps or flurries of action/reaction/reaction/etc.

The audio-videotape records the exact sequence of verbal and nonverbal events. In writing them down slightly after they happen (and while new events are occurring that one is tucking into memory to write down later), the narrative observer sometimes jumbles the sequence of events or, for economy, collapses two events of the same nature.

A well-produced videotape of a classroom is a permanent resource for many different kinds of microanalysis, because of the detail and precision of information it contains.

What Narrative Observation is Good For

The narrative observer will always have a wider angle of vision than the video camera; in a sense it can be said that the human "recorder" in the classroom can "watch" more than one thing at a time. The camera operator's visual awareness is restricted to the frame of the camera, whereas the narrative observer can be recording one event and be aware of other events going on at the same time, preparing to record them--and be recording them in terms of their relationship to one another or to the classroom context.

The experienced narrative observer also brings to the classroom a sense of "history" and context that the camera does not have. The observer can usually evaluate intensity and saliency at the time of the event better than a videotape can show us later. The narrative observer is better able to focus on particular students, without losing view of the class as a whole, and to follow events through to their conclusion or resolution especially as they affect individuals.

Conclusion

Neither of the two methods of recording classroom events--videotaping and narrative observation--will ever be able to capture everything that goes on. Each, by its very nature, is limited, although each can be greatly enhanced as recording methods. As Erickson (1978) points out, developing "languages of description" will enable the narrative observer to convey the patterns of events without being required to do the impossible, that is, write down everything that happens. By the same token, sensitive, intelligent camera and microphone work can make the videotape record of the classroom comprehensive yet rich enough in detail to tell us about individuals as well as groups and the class as a whole.

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