Putting the viewer in the picture:
Issues in making videos about classroom processes for people to watch

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Overview: Problems and Prospects in using classroom video

- Temporary vs. Persistent Problems
- The power and peril of anecdotes
- Getting people to notice the right things
  - Seeing is harder than it looks
  - We are prone to notice the wrong things
    - And very quickly
- Seeing what isn’t here
  - A way to move beyond cultural scripts
Temporary vs. Persistent Problems

- Technical problems are pressing
  - But temporary
- Problems related to how human beings represent and learn from video
  - Likely more persistent
True Tales of Algebra: Brian White hated it. It made Julie Beall cry. Tim Broneck got an F-minus. Tina Casale failed seven times. And Mollie Burrows just never saw the point. This is not a collection of wayward students, of unproductive losers in life. They are regular people from the Sacramento region, with jobs and families, hobbies and homes. And a common nightmare in their past.

Eighth-grader Manpreet Kaur works out an algebra homework problem during class at Spring View Middle School in Rocklin. New state laws make algebra a required class for all high school students to graduate, and California's academic standards say algebra should be taught in eighth grade, if possible.
The power of anecdotes

Borgida & Nisbett (1977)

- Presented U of Michigan undergraduates with information about courses either as
  - Results of a survey of all students in a course, or
  - Personal experience of experimenter (a student previously unknown to them).

- Looked at:
  - student ratings of influence and
  - whether students took the recommended courses and avoided the ones with poor evaluations

- Which was more convincing?
Need to establish that video cases are representative

- Because it will be taken as such
- Several approaches
  - Sampling of representative events
  - Post-hoc expert judgment
  - Analysis of a sample of video
    - i.e., HOMALS

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<thead>
<tr>
<th>Points</th>
<th>Labels</th>
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<tbody>
<tr>
<td>a</td>
<td>Chinese Teachers</td>
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<tr>
<td>b</td>
<td>Chinese Students</td>
</tr>
<tr>
<td>1</td>
<td>U.S. Teachers</td>
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<tr>
<td>2</td>
<td>U.S. Students</td>
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Second issue: Looking for the right things

- Two general sources of explanation
  - Personal attributes
  - Situation
- Bias toward explaining others’ actions in terms of personal attributes
  - Fundamental attribution error (Ross, 1977)
  - Evidence that this is a Western bias
- American viewers (both teachers and college students) focused more on personal attributes in describing teaching vignettes they’d watched compared with Chinese viewers
- Why this might a problem
  - Focus on personal attributes unlikely to lead to improvement
    - These are things that are difficult to change
Impressions are formed very quickly

- On a remarkably small set of data

Thin slices of nonverbal behavior

- Showed untrained judges brief (three 10 second clips for each teacher) silent video of college lectures
  - Rated various things
- Correlated with end-of-semester course ratings by (different) students who took the courses

**Ambady & Rosenthal (1993)**

<table>
<thead>
<tr>
<th>Variable</th>
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<tbody>
<tr>
<td>Accepting</td>
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<td>Active</td>
<td>.77**</td>
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<tr>
<td>Attentive</td>
<td>.48</td>
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<td>.56*</td>
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<td>.82***</td>
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<td>Honest</td>
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<tr>
<td>Likable</td>
<td>.73**</td>
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<td>(Not) anxious</td>
<td>.26</td>
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<tr>
<td>Optimistic</td>
<td>.84***</td>
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<td>Supportive</td>
<td>.55*</td>
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<td>Warm</td>
<td>.67*</td>
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<tr>
<td>Global variable</td>
<td>.76**</td>
</tr>
</tbody>
</table>

* p < .05. ** p < .01. *** p < .001.
But how you slice it may matter

- Giving viewers something to do may affect what they see
  - Can attend to either
    - Personal qualities
      - Probably not very productive in terms of learning from what you see
    - Teaching and learning processes
      - Potentially more useful
Time course of impression formation – personality

First Grade Lesson - Personality
Time course of impression formation – personality
Time course of impression formation – instruction
Time course of impression formation – instruction
Grounds for fear and optimism

- Impressions on the teacher’s personal attributes
  - are formed quickly (after 10 seconds)
  - are more stable over time

- Grounds for optimism
  - If viewers are given a task, what and when they notice shifts
Third issue: Seeing what isn’t here

- Getting beyond cultural scripts of teaching and learning
  - Seeing things that don’t happen here
  - Can focus on central issues
- Requires far more contextual support
Learning from video is hard, but not impossible

- Videocases are complex materials
  - Viewers approach them with different lenses
  - Can notice very different things
    - Some of which are more useful than others
- Learning to learn from videocases is a key educational concern
  - Watching a class is a key aspect of teaching expertise
  - Need a model of
    - viewer
    - viewing process
  - And an understanding of pedagogical practices that promote viewing expertise
- What does this have to do with videography?
  - Beginning with the end in mind
    - Collecting rich context information
    - And situating video cases
You can observe a lot by just watching

— Yogi Berra
Quick summary

- Learning to see what’s important in classrooms is
  - Important
    - Fundamental feature of expertise
  - Hard
    - Complexity
    - Biases
  - Teachable
  - Why it might be important
- Perspective may be key, both in terms of
  - Psychological perspective
    - The filters we bring to watching
  - Viewpoint
Teaching is a complex cognitive task

- Multiple, simultaneous goals
  - Attention to content being taught
  - Attention to methods of explaining content
  - Attention to student responses, misconceptions, motivation
  - ...and much, much more
Two kinds of teacher-led mathematics lessons

**U.S. class**
- Teacher-directed
  - Content from teacher
- Focus on procedures
- Don’t revisit a question

**Chinese class**
- Teacher-directed
  - Content from students
- Focus on explanations
- Challenges students
  - Restate
  - Expand
  - Explain

US teachers who watched this were impressed that Chinese teachers don’t move on when a question is answered correctly