

Crash, Burn and (maybe) Learn: Interns' Use of Video Cases to Problematize their Practice

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Abstract

This paper discusses findings from a study comparing two pre-service secondary science teacher interns' video-based reflections on facilitation of discussions that were completed as part of teacher education course assignments with video-cases of their teaching that they constructed for out of school audiences. The study investigated the following questions: *Is video case construction a more powerful tool for facilitating more complex analysis of teaching than making, watching and reflecting on videos? If so, how?* Interns were asked to view videos of their teaching during one lesson, select facets of practice that they deemed important or significant and organize them into a coherent "case" that could include supporting documents such as student work, lesson plans, and voiceover or written commentaries. Cross-case analysis revealed that the interns' stance towards video as a tool to facilitate analysis moved from a relatively closed to a relatively open one. In addition, their insights became more specific and more complex, and they began to focus their attention more fully on their instruction and what their students were saying and learning. There were key areas that each intern did not notice, however, showing that there were areas where growth did not occur. Our research suggests that teacher educators need to create more authentic tasks to support more complex analysis of teaching. By having particular audiences in mind that have some connection to their future work beyond the teacher preparation program, interns worked to construct a storyline that would be understood and valued by their audience. We also speculate that discussion with researchers about the process provided an important scaffold to guide their reflection. We conclude with a discussion of implications for facilitating more complex analysis of teaching

A student teacher's perspective

We analyze things weirdly

We break things apart

Let us go out there and crash and
burn

Make the tools useful

Do teacher educators have
it backwards?



Yes?

No?

Maybe so!

Research Question

- Is video case construction a more powerful tool for facilitating more complex analysis of teaching than making, watching and reflecting on videos? If so, how?



Theoretical Framework

Dissonance

Explicit
Noticing

Socio-cultural
Perspective

Case
construction

Discussion

The Study

- **Participants:** two secondary science interns
 - Bill - 7th grade physical science
 - Nate - high school physics
- **Data**
 - Videocases and lessons
 - Baseline, design session, and final interviews
- **Qualitative analysis** of data

Summary of Findings

- Interns' stance towards video analysis: **closed to open**
- Nature of insights: **more specific and more complex**
- Focus: **shifted from self to students**
- Role of audience: **authenticity & social interaction**

Bill's Video Case

Clips from a 7th grade physical science discussion

- Connecting contents with students' lives
- Allowing student-generated talk
- Keeping students on-task
- Making mistakes
- Elaborating on student answers
- Closing off discussion when he felt uncomfortable with the material

The Case of Bill: Stance

“The only reason I used the videotape is because the assignment said I had to . . . I just wanted to pass . . . That’s what they get, someone who’s just there to get my certificate.”
(Baseline Interview)

“It wasn’t a waste of time and the question you’re asking is having to make me think and reflect about what it is that I really was trying to do . . . And those are the questions you don’t ask yourself.” (Final Interview)

Nature of Insights: General to Specific

- “I move a lot during discussion . . . I want to be part of their student-body so that it’s not a teacher telling the students, but a facilitator of discussion about the topic” (Design session)
- “I then proceed to talk and do much of the explaining in this clip” (Final interview)

Nature of Insights: Simple to Complex

- “Wow! Those kids are asking dumb questions” (Baseline interview)
- “. . . I then to proceed and talk and do much of the explaining in this clip. After reflecting on this clip, I can see that I am uncomfortable with the material and I was having myself a hard time explaining it. I can conclude that material I feel threatened with I do not leave much room for classroom discussion” (Final interview)

Listening to Students

- “One of the students answered with gravity. . . I follow up with the question, “What do you mean by gravity?” . . . Because one thing I like about students talking is it gives me an opportunity to follow their thoughts, their answers, follow-up questions.” (Final Interview)

Not Noticing Gender

- 89 comments made by males, 3 by females
- “Cars would appeal to guys [because they are] less academic than girls naturally in 7th grade. . . So I’m not concerned with whether the girls are getting it.” (Final Interview)

Audience Matters

- “We do these videotape analyses in class. . . What ends up happening is you play your tape . . . And we all sit there going ‘I can’t hear it, I don’t know what’s going on.’ You’re taking five minutes out of context.” (Baseline Interview)
- “I think it would be good for administrators to know that yeah, I had a good powerpoint. So what? How did it affect the students? Students had to be responsible during it [by doing an assignment] - they weren’t just out to lunch you know.” (Final Interview)

Discussion

- Importance of **naming and framing** for change to occur
- Case construction as a **socio-cultural process**
- **Challenges** of developing **discussion skills** in science

Implications

- Authentic task
- Importance of scaffolding and social interaction



Conclusion

- The **potential exists** for video-based reflection to be a catalyst for professional growth, but **it matters how the task is framed and structured.**