

# Using Data to Make Sense of Data

The case of video records of practice in education

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### Overview

In education, video records of practice (VROP) of classrooms are commonly used as instructional resources for professional education as well as for research purposes. Education-focused repositories collect and curate these video records of practice to provide "detailed documentation of teaching and learning" (Bass et al, 2002, p. 79). Supplemental data – e.g. classroom artifacts – are often included with these videos as classroom artifacts providing additional context for the recorded events (Mace et al, 2007).

#### Supplemental data include:

- Student work
- Seating charts
- Lesson plans
- Transcripts
- Lesson materials (e.g. textbook pages, homework assignments)
- Classroom photographs

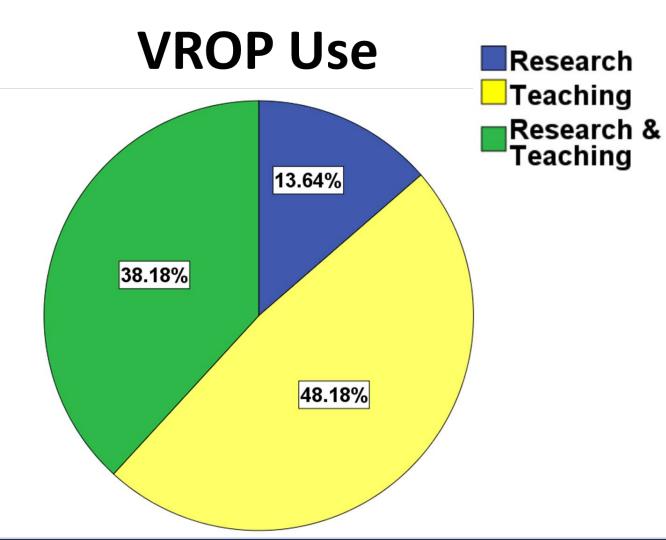
## Research Questions

- Are there patterns in supplemental data usage among researchers, teachers, and those who use video records of practice (VROP) for both research and teaching?
- Is there a correlation between research and/or teaching objectives and supplemental data re-use?

## Methodology

Surveys of 3 education data repositories conducted from July 2015-November 2016:

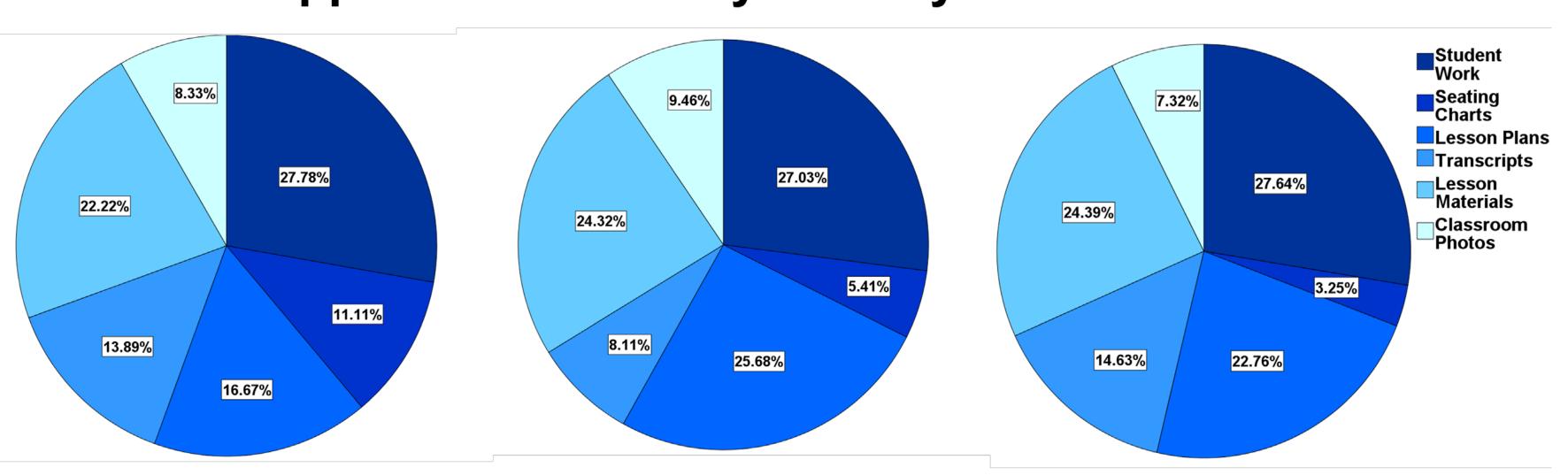
- 138 surveys completed (110 responses)
- Responses segmented into VROP users who are Teaching-only, Research-only, or who do both
- Data collected in Qualtrics and analyzed in R and SPSS



## Findings

- 64.5% respondents use supplemental data **occasionally** (for a particular purpose)
- 28.6% respondents use supplemental data **frequently** (a major component of their work)

#### **Supplemental Data By Primary VROP Use**



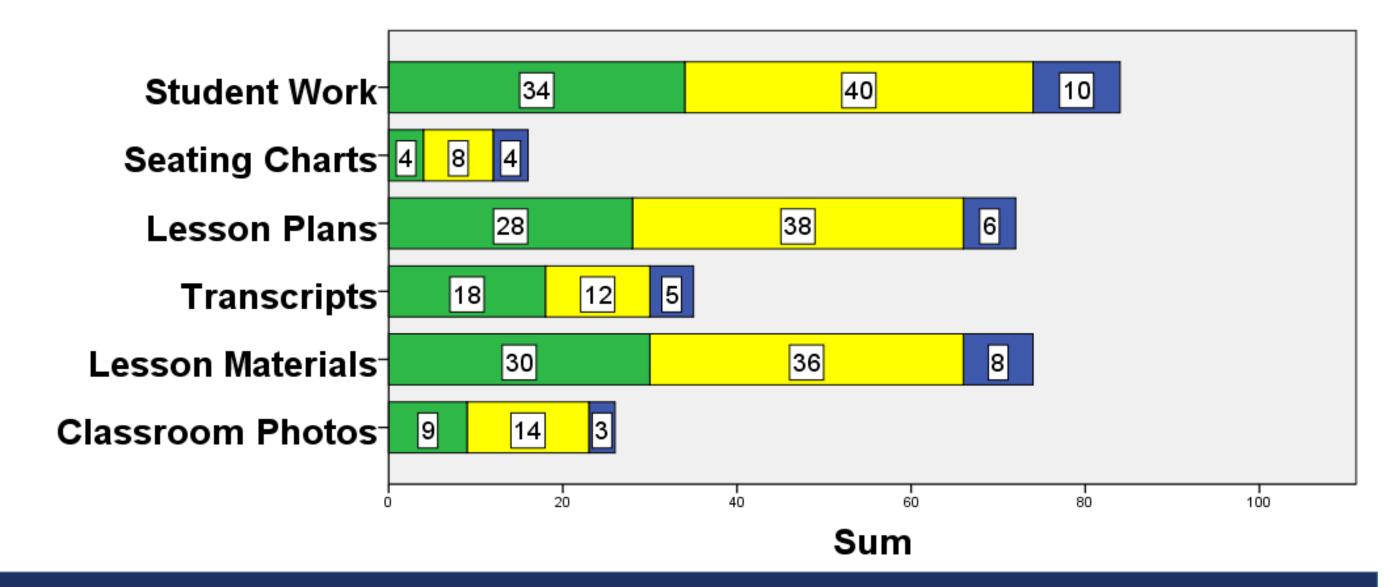
Research (n=15)

Teaching (n=53)

Research & Teaching (n=42)

• The subset of **Teaching-only** supplemental data users are the largest contributors to supplemental data use

#### **Supplemental Data User Contributions**



## References

- Bass, H., Usiskin, Z., Burrill, G., National Research Council (U.S.), Mathematical Sciences Education Board, & United States
  National Commission on Mathematics Instruction (Eds.). (2002). Studying Classroom Teaching as a Medium for
  Professional Development Proceedings of a U.S.-Japan Workshop. Washington, DC: National Academy Press. Retrieved
  from http://www.nap.edu/catalog/10289.html
- Pointer Mace, D. H., Hatch, T., & Iiyoshi, T. (2007). Teaching in and Teaching From the Classroom: Using Video and Other Media to Represent the Scholarship of Teaching and Learning. In R. Goldman, R. Pea, B. Barron, & S.J. Denny (Eds.), Video research in the learning sciences (pp. 397–410). Mahwah, NJ: Lawrence Erlbaum Associates.

VROP usage objectives met with supplemental data:

- > 50% of Research VROP users used these primary supplemental data for Analysis
- > 50% of Teaching VROP users used these primary supplemental data to Show as Examples and for students to Engage in Reflection
- Student work, Lesson plans, and Lesson materials are consistently relevant across *both* Teacher Educator and Education Researcher objectives

#### **Research and Teaching Objectives**

	Supplemental Data		
	Student Work	Lesson Plans	Lesson Materials
Train & Practice Data Collection	43.14%	33.33%	33.33%
Analysis	68.63%	50.98%	58.82%
Illustrate Research Findings	49.02%	33.33%	39.22%
Show Examples	73.17%	70.73%	64.63%
Create Practice Opportunities	48.78%	48.78%	47.56%
Engage in Reflection	76.83%	69.51%	71.95%
	Data Collection Analysis  Illustrate Research Findings  Show Examples  Create Practice Opportunities Engage in	Train & Practice Data Collection  Analysis 68.63%  Illustrate Research Findings  Show Examples 73.17%  Create Practice Opportunities Engage in 76.83%	Train & Practice Data Collection  Analysis  Illustrate Research Findings  Analysis  Show Examples  Create Practice Opportunities  Engage in  Train & Practice 43.14%  43.14%  33.33%  50.98%  49.02%  33.33%  70.73%  48.78%  48.78%  69.51%

## Implications

- Based on usage patterns of Lesson Plans, Lesson Materials, and Student Work by **both** Teacher Educators and Education Researchers, education data repositories should prioritize the collection of these supplemental data types.
- There are links between certain VROP objectives and the supplemental data used that data repositories should be aware of in order to support their designated users.





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