

# Developing Electronic Momentary Time Sampling Tools for Observations of Exceptional Students

Sarah D. Newton, Brandi Simonsen, Michael Coyne,  
D. Betsy McCoach, & Del Siegle

## Systematic Direct Observation Tool (SDOT)

For Each  
Observation  
Interval:

### Teacher Behaviors (10 secs)

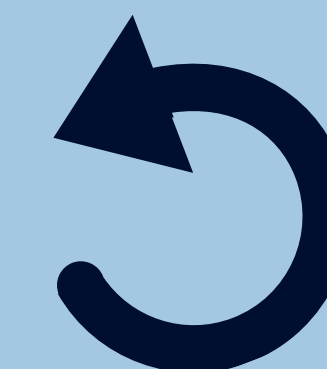
Prompts, Opportunities to  
Respond, General Praise, Specific  
Praise, General Negatives, Specific  
Negatives

### Break (5 secs)

Observer locates student  
to be observed in interval.

### Student Engagement (5 secs)

Observer observes student at the  
moment prompted and  
records the student's level of  
engagement.



## Research Contexts:

### The I-MTSS Project (IES Award R324A190012)

investigates the impact of  
integrated behavior and  
reading supports for K-2  
students across tiers, in a  
multi-tiered systems of  
support framework.

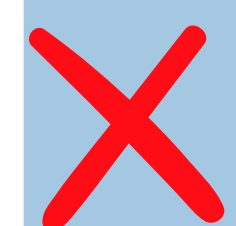


### Project BUMP UP (Javits Award S206A190028)

evaluates a collaborative,  
push-in model in  
elementary-level math  
classrooms to enhance  
gifted identification,  
increase math  
achievement, and develop  
math talent.



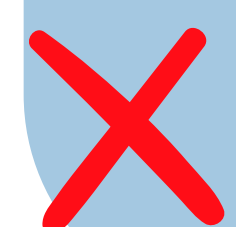
## SDOT in Qualtrics



~ Tool produced in stand-alone format; Resulting data may be merged with other existing data during data cleaning/analysis



~ Platform options and the ability to incorporate javascript into a Qualtrics instrument allowed us to add interesting "bonus" features to this tool, including: automatic tool advancement; within- and between-interval, timed, audio cues to switch observation targets, etc.

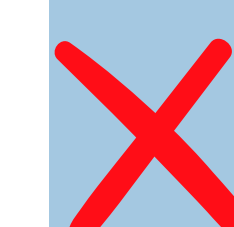


~ "Bonus" features ended up being a challenge for assessing inter-observer agreement (IOA) because the two, separate Qualtrics instances (one for each observer) did not start at exactly the same time when deployed in the field

## SDOT in REDCap



~ Can produce tool as a stand-alone instrument or incorporate it into a larger/longitudinal REDCap research database; Potential to cut down on time spent merging multiple data sets later



~ Though REDCap has many built-in features, I did not find easy ways to add the "bonus" features we incorporated into the Qualtrics SDOT; we used an outside timing application to prompt within- and between-interval shifts in observation targets



~ The lack of timed, automatic tool advancement was beneficial for estimating IOA--observers started IOA observations at exactly the same time, heard the same audio cues, and observed the same time intervals

## References

- Harris, P. A., Taylor, R., Minor, B. L., Elliott, V., Fernandez, M., O'Neal, L., McLeod, L., Delacqua, G., Delacqua, F., Kirby, J., Duda, S. N., on behalf of the REDCap Consortium. (2019). The REDCap consortium: Building an international community of software platform partners. *Journal of Biomedical Informatics*, 95, <https://doi.org/10.1016/j.jbi.2019.103208>
- Harris, P. A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., Conde, J. G. (2009). Research electronic data capture (REDCap)—A metadata-driven methodology and workflow process for providing translational research informatics support. *Journal of Biomedical Informatics*, 42(2), 377-381. <https://doi.org/10.1016/j.jbi.2008.08.010>
- I-MTSS Research Team. (2021). Systematic Direct Observation Tool (SDOT) [Unpublished Instrument]. Department of Educational Psychology, University of Connecticut.
- Qualtrics. (2020). Qualtrics (Version No. May 2024). Qualtrics. <https://www.qualtrics.com>

\*For simplification, this poster focuses on one observation tool used for the I-MTSS Project. However, lessons learned result from experiences with both projects.

\*This presentation shares perspectives of the authors and does not reflect the views of the U.S. Department of Education or any of its offices or programs.