Introduction

- Focus on one-year analysis of a secondary mathematics teacher group
- Provide a framework used to describe and analyze teachers’ uses of student learning data.

Framework is based on 5 years of data collection in 11 different teacher groups.

Research Questions

- What percentage of time do teachers spend working with data during collaborative inquiry?
- What is the specific nature of the teachers’ work with student learning data?
- What influences the nature of their work? Is there a relationship between a group’s stance toward learning data and their stance toward dialogue?

Research Methods

- Setting: Madrid High School: located in a small, suurban city in the northwestern US.
- Student demographics in line with state averages, with the exception of a larger African-American population.
- State assessment scores in line with state averages.

Context:

- With support from a three-year professional development project, mathematics and science teacher leaders in Madrid’s school district spent one year learning about collaborative inquiry processes and facilitating the next year, each lead mathematics teacher (including Madrids) formed a collaborative inquiry group (CIG) in their own school focused on improving student learning through examination of student data. Participation in the Madrid CIG was mandatory. The group was comprised of 6-8 teachers, approximately half of whom remained in the group for its initial four years.

Data:

- Over 95% of the CIG meetings at Madrid were audio-recorded and transcribed over a four-year period. Meetings from the final year are the focus of this paper.
- Interviews with teachers, the facilitator, and the principal occurred each year.
- Informal conversations and emails were also documented and archived.

Implications

- This paper contains a framework,
- for analyzing various aspects of the “looking at student work” activity commonly embedded in collaborative teacher inquiry;
- designed to provide insight into the overall perspectives and activities of the group, not individual teachers;
- that provides specific measures for the relationship between student learning data and CIG activity;
- useful for both researchers and facilitators of collaborative teacher inquiry.

References


Theoretical Framework

- Figure 1: Epistemological stance toward student learning data.
- Figure 2: Dialogic stance toward student learning data.

Data Phases for Collaborative Inquiry Work

- Data exploration: Teacher activity and discussion related to potential data collection and measures for student learning.
- Data collection: Teacher activity and discussion related to the implementation of the data collection tools.
- Data analysis: Teachers’ interpretations of student learning data are the focus of the research.

Implications

- Links from the teachers’ analyses of student data to learning goals and future approaches to classroom practice.

Acknowledgements

- Support for this work has been provided by a Mathematics Science Partnership grant from the US Department of Education and by the National Science Foundation Grant ESI-0554579. The opinions expressed are solely those of the authors.