WHAT MATTERS TO MIDDLE SCHOOL MATHEMATICS TEACHERS: RESULTS FROM A THREE-YEAR PROFESSIONAL DEVELOPMENT PROGRAM

Laura B. Kent
University of Arkansas
lkent@uark.edu

This poster session describes the results of a ranking activity from a three-year professional development (PD) program for middle level mathematics teachers. Not surprisingly, teachers in their first year of the PD program valued observing other teachers use questioning techniques with students and classroom observations more than any other of the seminar style activities. Some subtle shifts such as planning with other teachers and activities involving sorting student work were valued higher for year three teachers rather than year one and year two teachers. The results are consistent with the types of activities teachers desire in PD programs (Matherson & Windle, 2017).

The conceptual basis for the three-year professional development program involved two core components. The first component involves knowledge of content and students (Ball, Thames, & Phelps, 2008). The focus of the PD is exploring diverse student approaches to solving middle grades mathematics problems and serves the dual purpose of increasing middle school teachers' content knowledge and their understanding of students' thinking within specific mathematics content areas and topics. The second component of the professional development is examination of potential learning trajectories with the goal of planning and predicting student responses and questions that will promote productive mathematical discourse (Sztajn, Confrey, Wilson, & Edgington, 2012).

This study answers the following research questions:

1. What activities in professional development specifically focused on middle school mathematics do teachers value the most?
2. Are there shifts in what teachers value from year one participation to year three participation?

Data sources were part of a survey that was given to teachers at the end of each year of the three-year professional development program. The structure of the program involved three days of seminar style sessions in which teachers viewed videos of students solving problems, sorting student work, readings, discussions, planning problems to pose, and videos of teachers posing problems. Three of the four classroom embedded sessions involved sorting student work and then watching the host teacher orchestrate the sharing and questioning students. The fourth classroom embedded day involved planning problems and interviewing individual students.

Fifty-two teachers were asked to rank 10 professional development activities from 1 (most valuable) to 10 (least valuable). The 10 activities are: watching videos of students solving problems, predicting student solution strategies, observing in classrooms, interviewing individual students, sorting student work, planning with other teachers, learning about problem types, videos of classroom instruction, questioning techniques, and readings. The highest ranked activities of year one and year two teachers were questioning techniques and classroom observations. However, year 3 teachers ranked predicting student solution strategies and planning with other teachers highest, suggesting shifts in priorities over the three years of professional development.

References

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