

**A Longitudinal/Cross-Sectional Study of the Impact of *Mathematics in Context*  
on Student Mathematical Performance**

**Principal Interview: School Context**  
(Working Paper #12)

Mary C. Shafer, Jon Davis, and Lesley R. Wagner

Wisconsin Center for Education Research  
University of Wisconsin–Madison

Shafer, M. C., Davis, J., & Wagner, L. R. (1997). *Principal interview: School context (Mathematics in Context Longitudinal/Cross-Sectional Study Working Paper No. 12)*. Madison, WI: University of Wisconsin–Madison.

The research reported in this paper was supported in part by the National Science Foundation #REC-9553889 and by the Wisconsin Center for Education Research, School of Education, University of Wisconsin–Madison.

## Description of Principal Interview: School Context

The principal interview was the primary instrument used to gather information about the school context. Initial questions gathered information on the vision for student learning in the school, the vision for student learning in mathematics, and the principal's perception of the best ways for students to learn mathematics. Two questions were dedicated to change in policies regarding curriculum and instruction. Other questions addressed the ways the principal supported improvement of instruction, teacher collaboration, and professional development. Two questions gathered information about structural conditions in the school: duties of the mathematics department chair or lead teacher and procedures for assigning students to classes.

The interview was composed of ten questions. Probing questions were designed to enhance both the breadth and depth of responses and to ensure consistency of the data gathered from all study principals. A brief introductory statement to the principal provided a description of the interview, assurance that there were no right or wrong answers to interview questions, and notification that the interview would be audiotaped.

The first interview question asked the principal about the general vision for student learning in the school. The next question asked about the vision for student learning in mathematics, in particular. The third question focused on the best ways for students to learn mathematics. The probes provided specific attention to (a) whether meaningful contexts should be used to present concepts; (b) the importance of teaching concepts; (c) the importance of teaching algorithms and procedures; (d) the role of problem solving; (e) whether basic skills should be mastered before problem solving; and (f) the role of calculators.

The fourth interview question asked the principal about the ways teachers were made aware of policies related to curriculum and instruction. The next question focused on the ways the principal supported teachers in improving instruction. Probing questions provided attention to (a) materials and other resources for teachers, and (b) the type of feedback given to teachers.

The sixth interview question focused on professional development opportunities provided for all teachers and for mathematics teachers in particular. Probing questions centered on (a) goals for professional development; (b) how the goals are determined; (c) who presents the professional development; and (d) the teachers' role in planning professional development opportunities. The next question asked how changes in policy or curriculum were supported with professional development opportunities for teachers.

The eighth interview question asked whether there was a department chair or lead teacher for the school, how that person was chosen, and the duties associated with that position. The next question asked how teachers collaborate in creating instructional activities or assessments. The probing question addressed the availability of common planning time for teachers.

The final interview question gathered information on the procedures for assigning students to mathematics classes. Probing questions asked whether (a) the procedure is different for honors classes; and (b) students stay together as a group from teacher to teacher.

The principal interview protocol was used during the fall semester of each study year. The interviews were conducted at times that were convenient for the principal and that did not interfere with his/her duties, such as before or after school. Interviewers were instructed to follow particular procedures, including asking probing questions and interjecting nonjudgmental comments when appropriate (see Instructions for Interviews in this appendix). All principals completed an interview. The interviews in Districts 1 and 2 were conducted by the on-site observer in each district. Audiotaped interviews were

promptly sent to the research center. Interviews with teachers in Districts 3 and 4 were conducted via telephone by the project director at the research center. The interviews varied from 20-30 minutes, depending on principal responses and the need to use probing questions. Principals did not receive an honorarium for the interview. Interviews were transcribed for analysis.

## Principal Interview Protocol: School Context

### Instructions for Interviewer

1. Be sure that you and the principal/teacher are alone and in a quiet room where responses can be recorded. Be sure that the tape is labeled with the principal/teacher's full name and the date of the interview.
2. Remember to follow the written protocol faithfully. You should always probe once if you think that the principal/teacher has not answered the question asked. In most cases, probes are given. In other cases, you may use one of the following.
  - Anything else?
  - Can you tell me more about ( )?
  - Rephrase the question.
3. In responding to some questions, the principal/teacher may describe one aspect of the question in depth while not addressing the breadth of the question. Probes are provided to assist you in eliciting a broad response to each question. As you listen to the person's responses, glance at the list of probes and use the probe(s) that will give a more complete answer to the question. You might say, for example, "What about (probe)?" or "How important is (probe)?"
3. If the principal/teacher has already answered a question you are about to ask, you should say: "The next question is ( ). I think you have already answered it. Do you think you have answered it? Is there anything else you want to add?"
4. Your responses to the principal/teacher's statements should be non-committal and non-judgmental. Use responses such as "Thanks," "That's fine," "Alright," and "Okay."
5. If you forget to ask a question, make sure that you go back and ask it even if it is out of order.
6. Thank the principal/teacher for his/her time.

Instructions adapted from:

Fennema, E., Carpenter, T., & Loef, M. (1990). *Belief Interview: CGI-2*. Madison, WI: University of Wisconsin-Madison.

**Principal Interview Protocol: School Context**  
*Mathematics in Context* Longitudinal/Cross-Sectional Study

*Turn on the tape recorder and record the following:*

This is (your first and last names). I am interviewing (principal's name) who is the principal at (school name). Today is (month, date, year).

*Say to principal:*

I am interested in your vision for teaching and learning in this school, opportunities for teachers' professional development, and support provided to teachers. Please answer the following questions as truthfully as possible. There are no right or wrong answers to these questions. I am only interested in your opinions and ideas. Your responses will be audiotaped.

1. In general, what is the vision for student learning at this school?
2. What is the vision for student learning in mathematics at this school?
3. What is the best way for students to learn mathematics?
  - Probe: Meaningful contexts used to present concepts
  - Probe: Importance of teaching concepts
  - Probe: Importance of teaching algorithms or procedures
  - Probe: Role of problem solving
  - Probe: Mastery of basic skills before problem solving
  - Probe: Role of calculators
4. How are teachers made aware of policies related to curriculum and instruction?
5. How do you support teachers in improving their instruction?
  - Probe: Role in providing materials/resources for teachers
  - Probe: Type of feedback provided to teachers
6. What types of professional development activities do you provide for teachers in general and teachers of mathematics specifically?
  - Probe: Goals for professional development meetings
  - Probe: How are goals determined
  - Probe: Who presents
  - Probe: Teacher's role in planning
7. When the school/district decides upon a change, for example, in policy or curriculum, how is the change supported with professional development opportunities for teachers?
8.
  - a. If there is a mathematics department chair or lead teacher in this school, how is that person chosen?
  - b. What are that person's responsibilities?
9. How do teachers collaborate in creating classroom activities or assessments?
  - Probe: Common planning time