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# Mathematics Coaching Handbook: Working with Teachers to Improve Instruction

Hansen, Pia M.

2009 ♦ Eye on Education

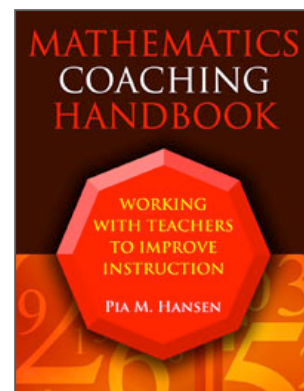
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## DESCRIPTION

*Mathematics Coaching Handbook: Working with Teachers to Improve Instruction*, written by Pia M. Hansen, argues that previous professional learning initiatives have failed because they focused on teaching a set of routines and techniques that alone are not enough to increase student achievement. Mathematics content coaching, as described in the book, goes deeper and promotes learning mathematics in ways that reflect a standards-based approach and therefore has the greatest potential of influencing classroom practice and student achievement. This book is an important reference for preparing mathematics content coaches for their work in supporting teachers to improve student achievement. Roles and responsibilities of mathematics content coaches are described and include:



- Increase mathematics content knowledge of teachers
- Enhance instruction
- Collaborate with individuals and teams
- Share research
- Facilitate understanding of standards
- Interpret data
- Examine assessments
- Align curriculum
- Organize resources

The book is organized into eight chapters, each providing insight into the skills necessary for providing leadership as a mathematics content coach. The chapters include:

1. Examining the Role of a Mathematics Content Coach
2. Preparing Yourself
3. Collaborating with Administrators
4. One-to-One Collaboration
5. Understanding Group Work
6. Working with Groups
7. Structures for Examining Teacher Practice
8. Conquering Challenges, Evaluating and Celebrating Success

## STAGE 1 LEADERSHIP DEVELOPMENT

*Mathematics Coaching Handbook: Working with Teachers to Improve Instruction*, written by Pia M. Hansen, supports stage 1 development of specialists working to develop the skills and knowledge necessary for effective coaching.

Specialists beginning their work will find chapter 2, “Preparing Yourself,” a useful resource. They will find guidance on topics including:

- Setting Goals for the Year
- Scheduling Time
- Communication Strategies
- Dealing with Conflict

Specialists working to develop a collaborative relationship with administrators will find chapter 3, “Collaborating with Administrators,” helpful when:

- Meeting with the Principal
- Gathering Data to Drive Instructional Practices
- Staying Out of the Middle Position
- Owning up to Mistakes and Mishaps

Specialists working in a one-to-one collaboration will find the information in chapter 4 useful with topics such as:

- Beginning with a Positive Relationship
- Planning a Pre-Conference
- Using Observation Forms
- Planning for the Post Conference
- Planning for Coaching Cycles

Specialists working to provide professional learning opportunities with groups will find the information in chapters 5 and 6 including:

- Developing Collaborative Teams
- Creating Agendas
- Running Meetings Effectively
- Presenting to the Whole Staff
- Implementing a New Curriculum

Specialists working to examine teacher practice will find chapter 7 helpful with information including:

- Looking at Student Work
- Using Lesson Study
- Using Action Research
- Examining Cognitive Demand
- Using Video Clip for Staff Development
- Walk-Through Observations

### **STAGE 3 LEADERSHIP DEVELOPMENT**

*Mathematics Coaching Handbook: Working with Teachers to Improve Instruction*, written by Pia M. Hansen, supports stage 3 leadership development for leaders interested in advocating and systematizing leadership skills of those they lead. Working with a group of mathematics specialists, leaders might use each chapter to facilitate ongoing professional learning opportunities. The organization of each chapter around several key ideas related to the chapter topic provides an opportunity for using an expert group protocol. Each chapter concludes with a section called “Final Thoughts” useful as a prompt for individual or group reflection.