

# Mathematics Coaching: Moving from Master Teacher to Mathematics Leader



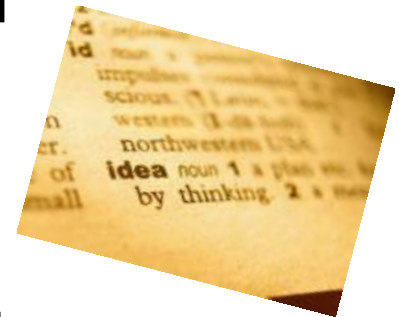
Arlene P. Mitchell  
RMC Research Corporation  
Denver, CO

# Professional Development for Coaches

---

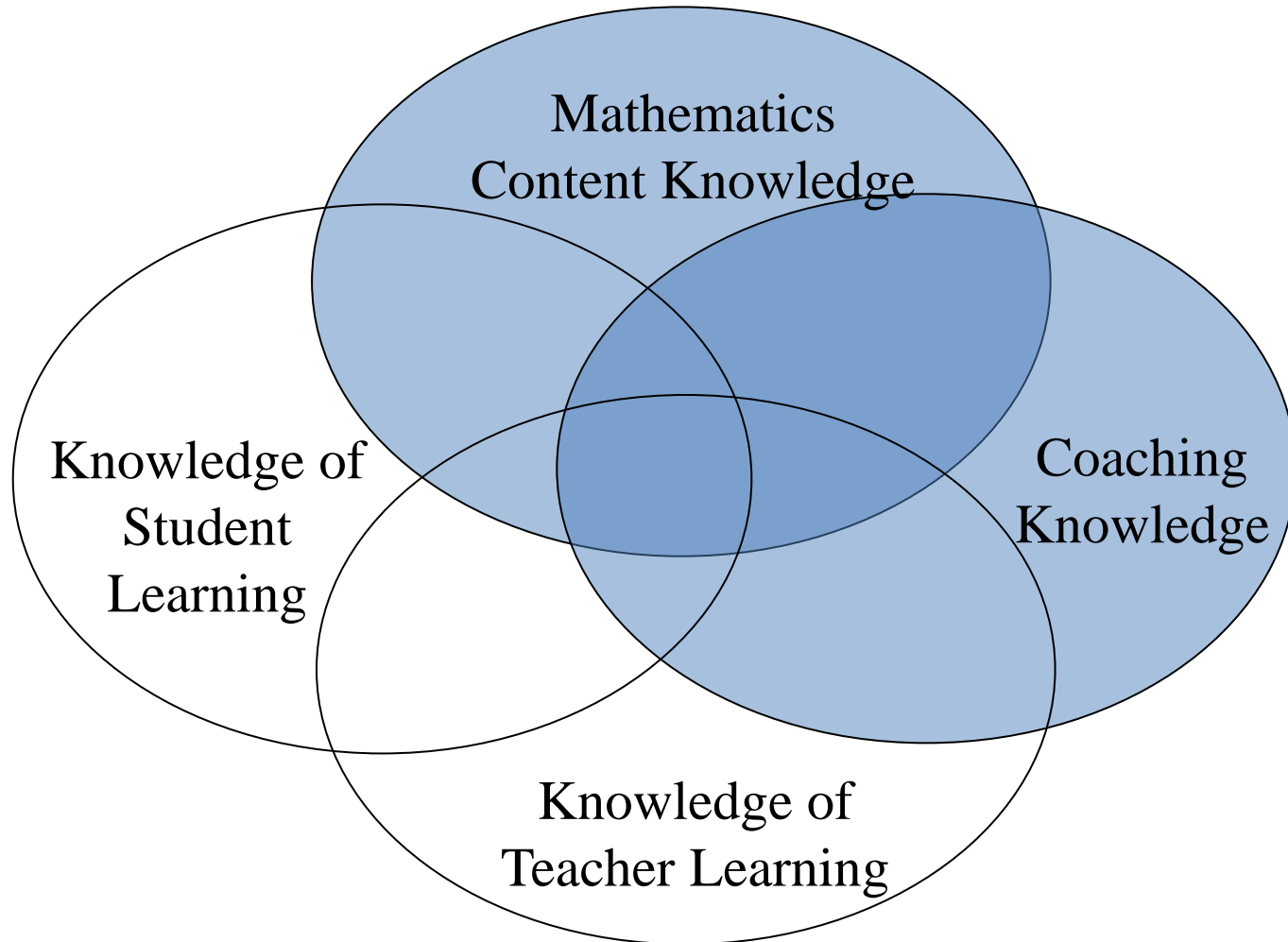
A mathematics coach is an **on-site professional developer** who enhances teacher quality through **collaboration**, focusing on **research-based, reform-based, and standards-based**

instructional strategies and mathematics content that include the **why, what, and how** of teaching mathematics.



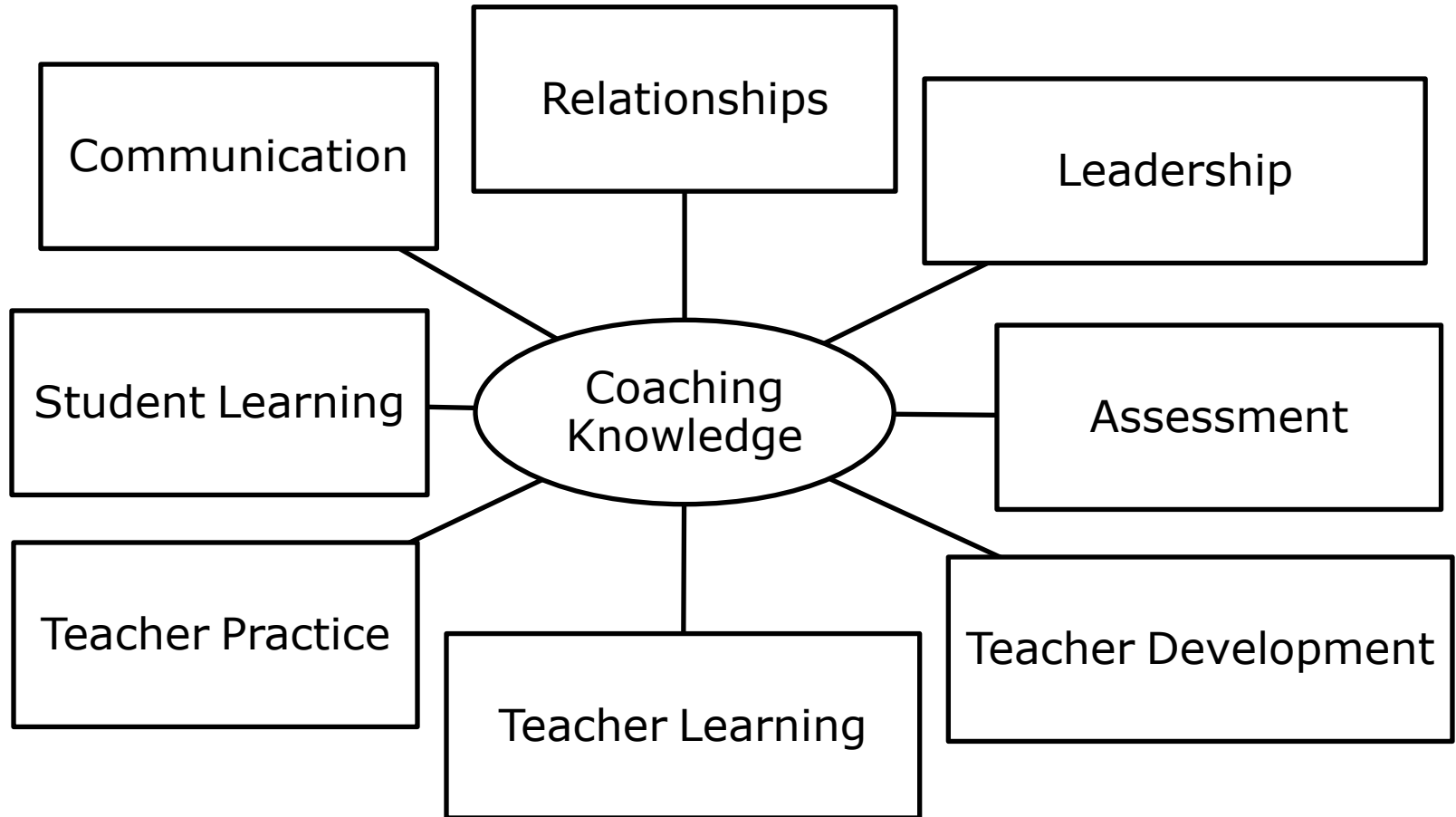
# Knowledge Domains

---



# Coaching Knowledge

---



# Professional Development for Coaches and Administrators

---

- Eight sessions (October – February)
  - ½ day for coaches and their administrators
  - 1 ½ days for coaches only
  
- Refresher session (September)
  - ½ day for coaches and their administrator
  - 1 ½ days for coaches only



# PD Sessions for Administrators & Coaches (1/2 day)

---

- Discuss progress of coaching within building
- Establish a culture of coaching in building
- Provide information on effective mathematics classrooms:
  - ▣ Standards for Mathematical Practices
  - ▣ Principles to Action
- Relate coaching cycle to administration support



# Culture of Coaching

School Leaders	Mathematics Coach	Teacher
<ul style="list-style-type: none"> <li>• Articulate a clear vision for teaching and learning</li> <li>• Implement coaching as a professional development model</li> <li>• Set aside time for coaching within the daily schedule</li> <li>• Share goals and beliefs of coaching to entire school</li> <li>• Articulate clear expectations for coaching</li> <li>• Budget appropriate resources (time and personnel) to support coaching</li> <li>• Make mathematics coaching a priority</li> </ul>	<ul style="list-style-type: none"> <li>• Ask reflective questions of teachers</li> <li>• Provide feedback to teachers</li> <li>• Share instructional materials and resources</li> <li>• Maintain confidentiality with teachers about coaching sessions</li> <li>• Use a structured approach for coaching:               <ul style="list-style-type: none"> <li>○ Gather information before the lesson</li> <li>○ Observe complete lesson</li> <li>○ Collect &amp; document evidence from lesson</li> <li>○ Debrief &amp; reflect with teacher after lesson</li> </ul> </li> <li>• Be flexible &amp; dependable</li> <li>• Make mathematics coaching a priority</li> </ul>	<ul style="list-style-type: none"> <li>• Communicate specific instructional needs to coach</li> <li>• Ask for specific types of support from the coach</li> <li>• Listen to hear ideas being presented</li> <li>• Take shared responsibility for cultivating a positive and productive coaching relationship</li> <li>• Set aside appropriate amount of time for coaching sessions</li> <li>• Be open to try new instructional practices</li> <li>• Make mathematics coaching a priority</li> </ul>

# Consumer of Coaching Framework

---

## ***How to be a Wise Consumer of Coaching*** **(Journal of Staff Development, February 2011)**



- ❑ Feedback
- ❑ Reflection
- ❑ Classroom expectations
- ❑ Content
- ❑ Structure
- ❑ Communicating needs



# PD for Mathematics Coaches

## (1 ½ days)

---

- Developing rapport and trust with teachers
  - Adult learners
  - Change process
  
- Observing / practicing coaching techniques
  - Videos
  - Scenarios
  
- Tools to determine teacher needs
  - Teacher Needs Inventory
  - Reflections (Coach and Teacher)
  
- Sharing and discussions among coaches



# Ten Roles for Coaches

(Killion, 2009)

---

- Data coach
- Resource provider
- Mentor
- Curriculum specialist
- Instructional specialist
- Classroom supporter
- Learning facilitator
- School leader
- Catalyst for change
- Learner

