

# Effectively Leading Professional Learning in Science and Mathematics

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SREB

Partnership for Reform in Science and  
Mathematics (PRISM)

Lead Teacher Academy

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# The Best Professional Development Experience Ever!

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- Take a moment to reflect: What is your most memorable professional development experience (positive)?
- Jot a few notes:
  - Topic
  - Format in which it was offered
  - Description of what the presenter did and what participants did
  - What made this such a positive experience?

# Our Track Record for Quality PD Is Not Good

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Although surveys indicate a high rate of participation in professional development activities, the time teachers actually spend in those activities is often less than 8 hours per activity.

National Center of Education Statistics, 1999,  
as reviewed by Tom Ganser, University of Wisconsin

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# We Have a “Small” Problem in PD and School Improvement

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“...[the] greatest problem faced by school districts and schools is not resistance to innovation, but the fragmentation, overload and incoherence resulting from the uncritical acceptance of too many different innovations.”

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Michael Fullan, 1991, *The New Meaning of Educational Change*

# We Must Shift the Focus to Problem Solving

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Successful professional development no longer focuses on only the learning of individual teachers. The focus has shifted to include improvement in organizational problem-solving.

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# Teacher Leadership Of Professional Learning – What You Need to Know

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- Why is teacher leadership important?
- What is quality professional development?
- What are drivers of and barriers to quality professional development?
- How should we evaluate the effectiveness of professional development?

# Teacher Leadership

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Why is teacher leadership of professional development so important?

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# Teacher Leaders Support Collaborative Work

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- Research: collaborative work is the most effective way to improve schools.
- Collaborative work must be supported by the school's culture
- Collaborative work will be supported only when teachers view themselves as leaders

# Collaborative Work Takes Place in a Learning Culture

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- Shared mission, vision, beliefs
- Collaborative inquiry
- Teams
- Focus on action and experimentation
- Continuous improvement focus
- Results orientation

DuFour & Eaker, Professional Learning Communities at Work, 1998.

# Sounds Great, but...

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- Collaborative work in a school sounds great – why is it so hard to make it happen?

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# Loosely Coupled

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- Karl Weick
- Some of the characteristics:
  - Uneven application of decisions
  - Unclear connections
  - Disregard for what goes on in other parts of the organization
  - Difficult to supervise
  - Communication is difficult
- Education organizations fit the characteristics

# Results of Being Loosely Coupled...

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- Teachers are isolated
- Too much time away from others
- People do not see how their work connects
- The most at-risk teachers have no opportunity to learn from the best
- Learning organization is threatened
- Ultimately, student learning suffers

# How Can Schools Fight Being “Loosely-Coupled?”

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- Break down isolation
- Encourage collaboration
- Agree on a focus
- Invest in professional development
- Provide leadership

Where do teacher leaders fit into the solution?

# How Can Teacher Isolation Be Broken Down?

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- Redesign how time is used in the school
- Improve meetings: faculty, departments, teams, committees
- Restructure the school day
- Provide coaching and mentoring
- Create teacher leader position

# Quality Professional Development

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What is quality professional development?

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## NSDC Standards

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- **Context:**
  - Learning Communities
  - Leadership
  - Resources
- **Content**
  - Equity
  - Quality Teaching
  - Family Involvement
- **Process:**
  - Data-driven
  - Evaluation
  - Research-based
  - Design
  - Learning
  - Collaboration

# Job-Embedded Professional Development

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- Study groups
- Action research
- Demonstration classrooms
- Peer observation
- Reflective activities
- School improvement planning
- Mentoring new teachers

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## Link it!

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- School focus, aligned with district goals
- Focused on improving organizational problem-solving
- Based on a comprehensive school improvement plan
- Based on the things students need to know and be able to do and knowledge and skills teachers will need to help reach student achievement goals.

# Tier One Strategies

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- Action research
- Whole faculty study groups
- Japanese Lesson Study
- Mentoring
- Peer coaching

## Tier Two Strategies

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- Journaling
- Self-assessment
- Examining student work
- Tuning protocol
- Portfolio development
- Conversation
- Internships/immersion

# Adult Learning

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- Six optimum conditions for adult learning:
  - Need to learn and input into what, why, and how
  - Meaningful relationship to past experience
  - What is learned relates to developmental changes and life tasks
  - Autonomy congruent with mode or method
  - Climate minimizes anxiety, encourages freedom to experiment
  - Learning styles taken into account

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# Drivers of and Barriers to Quality PD

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What are drivers of and barriers to quality professional development?

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# Create a Learning Community to Foster PD

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- Find and eliminate barriers to collaboration
- Redesign meeting agendas, calendars, etc.
- Redesign how time is used
- Help people see the value in teamwork
- Focus on the whole school

# Ingredients for Collaboration that Will Support the Learning Community

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- Time
- Focus and parameters
- A process to follow and guiding questions to pursue
- Training, resources and support
- Access to relevant, timely information
- Encouragement, recognition and celebration

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## Potential Barriers/Pitfalls

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- Time
- The teacher union is not included
- Budget cuts
- Faculty is skeptical about professional development
- Failure to provide follow-up assistance

# Evaluation of Professional Development

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How should we evaluate the effectiveness of professional development?

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# Evaluation: The Big Picture

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Evaluation of Professional Development should:

- Have a purpose that is linked to student achievement
- Be part of the planning process and continue through all phases of implementation
- Involve people at all levels
- Be formative and summative
- Be systematic
- Be systemic
- Use multiple data sources
- Be presented clearly
- Include all five of Guskey's Levels of Evaluation

**from Tom Guskey and Dennis Sparks, "What to Consider When Evaluating Staff Development",  
*Educational Leadership*,, 1991, 49 (3), 73-76.**

## What about NCLB & PD?

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- Referenced to student learning
- Data-based decisions
- Research-based practices
- Subject matter mastery for teachers
- Focused and on-going
- Activities match the content
- Fully evaluated
- Aligned to state standards, assessment and local school curriculum

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## For more information:

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