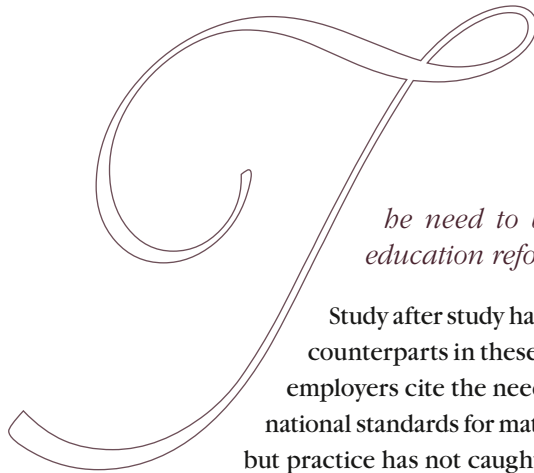


R&D A L E R T



FROM VISION Developing leaders for mathematics and science TO SKILLS



The need to build champions for mathematics and science education reform has grown dramatically over the past decade.

Study after study has shown U.S. students lagging behind their international counterparts in these core subjects, even as elected officials, educators, and employers cite the need to sharpen America's competitive edge. Challenging national standards for mathematics and science education have been established, but practice has not caught up.

In 1997, WestEd created the National Academy for Science and Mathematics Education Leadership to fill that gap. The academy develops the leadership skills of hundreds of individuals who are in positions to influence science and mathematics education. Participants range from teacher leaders, principals, and district-level math and science education coordinators to directors of statewide and regional improvement efforts, and from university professors to informal educators from museums and science centers.

These leaders participate in the academy as "fellows" for two years, attending extensive workshops (held at different locations each year), working with a mentor, joining in the Leadership Academy's electronic discussion network, and creating a "professional project plan" for applying in their own school systems what they are learning through the academy. The leaders develop a vision of high-quality teaching and learning and gain the skills to enact that vision.

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The leaders develop a vision of high-quality teaching and learning and gain the skills to enact that vision.

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FROM THE
CEO

The importance of mathematics and science literacy continues to grow in our knowledge-based, global economy, for learners everywhere, including here in the United States.

In recent years, the U.S. Department of Education and other federal and state agencies have increased their attention to the need for improving math and science education. The department sponsored a national math "summit" in 2003 and one focused on science in 2004. Facing all U.S. students and their schools are No Child Left Behind Act requirements for full proficiency in math and science by 2014.

ACCELERATING MATHEMATICS AND SCIENCE ACHIEVEMENT

WestEd staff have deep expertise in mathematics and science education. Our Mathematics, Science, and Technology Program aims to improve instruction and increase student achievement in these areas. Initiatives from this and other WestEd programs include research on teaching and learning, developing better curricula, improving teacher preparation and professional development, and connecting the expertise of "real world" scientists and mathematicians with K-12 classrooms.

In this issue of *R&D Alert*, we share a sample of what we've learned from this work to strengthen mathematics and science education. The lead article describes the core principles of WestEd's National Academy for Science and Mathematics Education Leadership. After five years running the academy, WestEd staff have refined effective approaches for developing teacher leaders focused on these subjects.

Another article shares new ideas for improving the preparation of mathematicians and scientists in higher education, drawing on an evaluation of the national "Preparing Future Faculty" program.

We address the importance of bringing cultural understanding into science education in an article about the recently published *What's Fair Got To Do With It: Diversity Cases From Environmental Educators*, edited by WestEd's Tania Madfes.

And we describe successful strategies for improving mathematics teaching and learning evolving over 17 years of work by WestEd's Mathematics Case Methods Project.

Readers will find more information on our Web site – WestEd.org – or by using the contact information at the end of each article.

The years ahead in school reform promise to be challenging ones, with intensified demands for performance on all fronts. WestEd, with its extensive research *and* direct service expertise, is a partner with states, districts, teachers, and parents in identifying and using the best tools to enable achievement for all students. We take this responsibility seriously – in mathematics and science education, as in all areas of our work – and we encourage you to join with us to meet the challenges ahead.

Glen Harvey
Chief Executive Officer



PREPARING Future Faculty IN Mathematics & Science

Intensive research training is usually central to graduate-level education in mathematics and the sciences. As a result, learning to teach often takes second place. College and university students, many of whom will go on to become K-16 educators, learn from faculty who may be excellent researchers but not effective teachers.

In 1993, the Council of Graduate Schools and the Association of American Colleges and Universities founded the Preparing Future Faculty (PFF) initiative. PFF offers graduate students a better understanding of faculty careers at a variety of postsecondary institutions and aims to strengthen the professional preparation, including teaching skills, of new doctorate holders.

THE PFF APPROACH

Central to the program's structure is a PFF "cluster" — a collaborative relationship between a PhD producer with a heavy focus on research (a doctorate-granting university) and a number of PhD consumers who will be doing most of the new faculty hiring in coming years (typically comprehensive universities, liberal arts colleges, and community colleges). The point of this structure is to broaden the perspective of doctoral students beyond the

research university to include other types of institutions — ones that currently employ 64 percent of postsecondary faculty.

Typically, the partnering schools provide faculty mentors who advise graduate students on teaching and service roles at non-research campuses. Mentors also may arrange classroom teaching and job shadowing experiences. The doctorate-granting university provides forums and seminars addressing subjects such as teaching theory, cultural diversity, the academic job search, campus governance, and career planning.

The first two phases of PFF, funded by The Pew Charitable Trusts, established campus-wide programs at research universities. The programs tended to focus on issues that cut across all subject matters, such as helping

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graduate students learn teaching skills. Subsequent phases funded individual departments, and thus addressed more discipline-specific interests. In the third phase, the National Science Foundation (NSF) funded PFF activities in biology, chemistry, physics, mathematics, and computer science. In the fourth phase, The Atlantic Philanthropies established projects in humanities and social sciences departments.

PRELIMINARY EVALUATION FINDINGS

In 2000, NSF and The Atlantic Philanthropies contracted with WestEd and Abt Associates, Inc., to conduct a three-year evaluation of PFF. In a draft report of the evaluation findings, the program overall receives high marks from participants: Students who have moved on to academic positions praise the enhanced preparation PFF gave them, the connections to diverse mentors, and the chance to teach independently at an early stage in their careers. Faculty involved in PFF appreciate opportunities to work with colleagues at other campuses and the open discussion of topics related to teaching, faculty work, and campus governance.

Although some faculty and students express concern that involvement in PFF might increase time-to-degree, the evidence does not support this view. Those students who say their time-to-degree was extended spoke of PFF as worth the sacrifice. One such graduate from Arizona State University explains: “I am certain that the extra time allowed me to mature academically, produce a better dissertation, and prepare for the intense challenges that quickly follow after grad school.”

But obstacles to more widespread implementation of PFF remain, particularly in the sciences. “While faculty may like the idea, their support for PFF is generally limited to allowing students to participate rather than actually engaging themselves with the program,” says Don Haviland, a WestEd Senior Research Associate and one of the PFF

“


I am certain that the extra time allowed me to mature academically, produce a better dissertation, and prepare for the intense challenges that quickly follow after grad school.

”

evaluators. “We found that some students felt the need to conceal PFF work from their professors.” Because graduate students traditionally work for their research advisors, there is pressure to not take on additional commitments. Evaluators found that fewer science faculty actively participated during the program’s third phase, and those who did were less likely to say that PFF was institutionalized at their campuses.

The presence of program activities that are campus-wide and discipline-specific seems to support the sustainability of PFF. A campus-wide activity, for example, might be a seminar on pedagogy that is open to graduate students from across the university. A graduate student in chemistry teaching a course section with a faculty mentor at a nearby community college is an example of a discipline-specific PFF activity. A mix of such activities lends visibility to PFF at the institutional level while encouraging departmental faculty to pursue activities tailored to their discipline.

Although external funding for PFF ended in 2002, most PFF programs continue with other funding, which is an indicator of the value of the program. However, the evaluation by WestEd and Abt also found that PFF requires a solid core of administrative and faculty supporters — not merely one or two — at both campus and departmental levels for sustainability.

According to Sharon Goldsmith, WestEd’s Project Director of the PFF evaluation, “At its best, PFF is responsible professional preparation that supplements research training. It better prepares the faculty who teach in our colleges and universities. By improving instruction in content areas for future K-12 teachers, PFF has the potential to improve teaching at all levels.” 

For more information, contact Sharon Goldsmith at 562.799.5106 or sgoldsm@WestEd.org.



CULTURAL diversity AND ENVIRONMENTAL EDUCATION

Environmental educators are sensitive to the perception that being “green” often means being white. Yet the challenges of understanding our global environment cross cultures, by definition.

Recognizing a need to reach more diverse students and communities, the Environmental Education Training and Assistance Project (EETAP), with funding from the U.S. Environmental Protection Agency, sponsored the development of an unusual book for educators. *What’s Fair Got To Do With It: Diversity Cases From Environmental Educators* provides a compelling tool for exploring the role of cultural differences in science education.

To lead the creation of *What’s Fair*, EETAP turned to WestEd’s Tania Madfes, a science and mathematics educator who has used case discussions in much of her work with teachers and professional developers.

“To better communicate with one another and with students, environmental educators — like all teachers — need opportunities to discuss their work, reflect about issues of diversity, and develop new ways of working that will create a more inclusive field. Using case methods is a way of doing that,” she explains.

Pioneered by WestEd staff almost two decades ago, education case discussions offer powerful learning opportunities. By reading and discussing first-person accounts of challenging situations, participants experience professional development that is both vivid and meaningful.

Knowing the power of this approach, Madfes and a group of diverse educators developed a series of environmental education cases. Each case describes the sometimes problematic relationships among different cultural groups within environmental education.

“We were aiming to promote rich discussion and thoughtful reflection. We hope to help users develop principles of practice — principles that they can apply to their own classrooms or community-based settings,” says Madfes. “The real value of cases is that they give you a specific context to discuss difficult issues without the discussion becoming a gripe session or overly personal.”

While they are grounded in the experiences of environmental educators from in-school and out-of-school settings, the *What’s Fair* cases describe issues and raise questions that apply to education in general as well as to society as a whole.

One of the primary areas addressed in *What’s Fair* is the need for teachers to be aware as they are teaching of how different cultures consider the world. “Most science lessons are constructed for a homogeneous student body, one that doesn’t take into account differences in culture, ethnicity, or religious beliefs,” Madfes explains.

A chapter on “Biophobia,” for example, describes a cross-cultural experience from the perspective of an American teacher in East Africa. It also raises issues that apply to any classroom where diverse cultures are represented. The teacher in this case describes her struggles to engage students through hands-on activities with animals. She soon reaches a barrier with students who were “conditioned to kill living things they found in their house” because of the potential danger from these “living things.” Despite the teacher’s enthusiastic attempts to engage students with animals, her efforts fail.

As with all the cases in *What’s Fair*, the “Biophobia” chapter includes commentary and facilitation notes that provide more context and help participants in a discussion to extract general principles from the case. For example, the “Biophobia” notes explain: “Even when students appear to be homogeneous, they’re not. It’s

(continued on page 9)

MATH LESSONS STEER

COMMON

AROUND

“How can you prove that?” the teacher asks the student. With that simple question, a math class becomes a place where arriving at the correct answer is not enough.

Probing students’ grasp of fundamental mathematical concepts, showing them how to recognize and avoid common mistakes, and ensuring that they can apply their knowledge in multiple settings — these are the critical aspects of materials developed by WestEd’s Mathematics Case Methods Project.

“There are curricula out there that are very good, and textbooks that teachers are required to use. We’re not replacing all that,” says Alma Ramirez, co-director of the project with Carne Barnett-Clarke.

Instead, the Mathematics Case Methods Project provides 10–11 supplementary lessons on core topics in each grade level, kindergarten through seventh grade, for teachers to use about once a month. The lessons are based on research about children’s thinking and on common errors that students make on assessments.

“There are particular stubborn misconceptions that kids carry with them and that cause them to make mistakes over and over in their later schooling,” Ramirez says.

For example, students learn that with whole numbers, the value goes up as the number of digits increases. But if they over-generalize mathematical ideas about whole numbers and try to apply them to rational numbers, their misconceptions will cause errors when they work with decimals or fractions. Unless teachers root out this false reasoning, many students will continually assert that $.49$ is greater than $.8$ or that $6/10$ is larger than $3/4$, for instance.

“A pitfall throws off your whole answer,” explains one elementary school student.

Through the project’s materials for students, known as Math Pathways and Pitfalls, children learn how to communicate their mathematical reasoning orally and in writing. In a typical lesson sequence, students first attempt to solve a math problem individually. Next, as a group, they dissect a correct response and try to prove the solutions. Then they analyze common errors that many students make, looking for misconceptions in their own and in peers’ thinking. Finally, they jointly write tips for avoiding such pitfalls.

During this process, students use a series of statements called “discussion builders” that help them converse respectfully while building mathematical knowledge. As one middle school student explains, discussion builders let them “help out the person who’s trying to give the answer and not be rude.”

In the past **17** years, the M development hours to mor

“You have students working together and then you facilitate a discussion and students are actually excited about expressing their ideas about mathematical concepts,” says Henry Phillips, a fifth grade teacher who has used the Math Pathways and Pitfalls curriculum.

Research studies have demonstrated the effectiveness of the lessons in settings with diverse students and teachers. In a 1998 pilot study, gains for the project group — which received 11 hours of the Math Pathways and Pitfalls lessons in place of regular math lessons — occurred regardless of whether

pitfalls

students were native or non-native English speakers. In addition, the achievement gap between struggling and successful students decreased for those who used the pilot lessons while the gap increased for the control group, which used the regular district- or school-adopted math lessons.

A 2003–04 study showed similar results. Students in five diverse districts were randomly assigned to experimental and control groups. During the school year, students in

their understanding,” she says. “At the beginning of the (Math Pathways and Pitfalls) process they were guessing. They didn’t know how to attack these problems. By the end, not only could they do some of these problems, they could explain it to someone else. They could explain why they were doing what they were doing, and they could also recognize their own pitfalls.”

In addition to providing materials for students, the Mathematics Case

“As teachers, we can’t assume that all the concepts we cover are clear to students,” Ramirez says. “Part of that is understanding the mathematics ourselves.”

In the past 17 years, the Mathematics Case Methods Project has provided about 30,000 professional development hours to more than 1,600 teachers, one fourth of whom were ethnic minorities. Pre- and post-tests show that teachers who participated in the project’s case discussions for two or more

Mathematics Case Methods Project has provided about **30,000** professional development hours to more than **1,600** teachers, one fourth of whom were ethnic minorities.

the experimental group completed 7 Math Pathways and Pitfalls lessons, whereas the control group completed the usual math curriculum at each site. Complete data were obtained from 577 second graders, 812 fourth graders, and 582 sixth graders. Across districts, at every grade, the mean adjusted post-test scores were higher for the experimental group as compared to the control group.

To Juliana Jones, a seventh grade math teacher, the reasons are clear.

“Being able to describe what is going on and why tells more about

Methods Project offers teacher professional development that relies on a process used in teaching hospitals and law schools. Small groups of professionals read an account about a lesson that proved more challenging than expected and discuss problems and solutions. This process, known as case discussion, helps teachers anticipate students’ potential misconceptions and deepens the teachers’ own mathematical understanding.

years improved their math knowledge by 23 percentage points. More recently, Ramirez and Barnett-Clarke have been testing instructional tools that include videotapes of actual lessons, print materials for students, and curriculum and discussion guides for teachers. **W**

For more information, contact Carne Barnett-Clarke at 503.249.7297 or cbarnet@WestEd.org; or contact Alma Ramirez at 510.302.4249 or aramire@WestEd.org.

(continued from page 1)

CORE PRINCIPLES

The National Academy operates on a set of core principles that guide its work in developing effective mathematics and science leadership.

- **Develop a vision of leadership rooted in specific academic standards.** Mathematics and science educators need an in-depth understanding of the standards for their subject matter and the research on how students learn the content in the standards. WestEd's Academy focuses extensively on the National Research Council's National Science Education

experience so profound that she helped start two programs that replicate this focus on standards — the Maine Governor's Academy for Science and Mathematics Education Leadership and the Northern New England CoMentoring Network.

- **Build leaders' skills in using data and research to guide reform.** Because the No Child Left Behind act mandates research-based reform approaches, this



Teacher leaders need to look beyond state standards and get the national picture.

Standards and the National Council of Teachers of Mathematics' Principles and Standards for School Mathematics. Academy fellows explore mathematics and science topics in depth, becoming familiar with the K-12 standards and research on the most common ways students struggle when learning these topics.

Part of becoming "fluent" in the standards is recognizing how topics build on each other from grade to grade and knowing how to create more coherent learning experiences that increase students' understanding as they progress through school, says Susan Mundry, co-director of WestEd's National Academy.

"Teacher leaders need to look beyond state standards and get the national picture," echoes Page Keeley, senior program director for science with the Maine Mathematics and Science Alliance, who was in the Leadership Academy's first cohort. Though she entered the program well-versed in her state standards, the Leadership Academy's focus on national standards opened her eyes to a broader wealth of research, scholarly thought, validated practice, and distilled expertise. Keeley found the

principle is more relevant than ever. Leadership Academy fellows learn leadership practices shown by research to influence student achievement, such as monitoring the effectiveness of school practices and their impact on student learning (Waters, Marzano, & McNulty, 2003), says Mundry.

- **Enable leaders to share experiences and learn from each other.**

As they take in research and theoretical knowledge, leaders need to emerge from the isolation that often accompanies their positions. Leadership Academy co-director Katherine Stiles points to a common practice in the Academy of giving participants opportunities to work together in role-alike groups for discussion or activities. For instance, university personnel confer with each other, and district administrators work with other administrators, sharing and comparing strategies with peers.

Because fellows go through the Academy together as a cohort, Stiles says, they study the same material, participate in joint activities, and forge a shared vision of leadership. Each fellow participates in the program's electronic network and facilitates a Local Study Group in his or her own setting. In addition, "learning colleagues," many who are fellows from previous cohorts, serve as consultants, resources, and advisors.



- **Structure professional development to recognize the ongoing, developmental nature of learning.** Research on professional development underscores the value of programs that continue over longer periods of time rather than those that are one-time events. Roughly 30 new fellows enter WestEd’s Academy each year and participate for two years. This extended period gives fellows the time to develop and apply their learning in ways that research indicates is beneficial. “By the second year, they really start to ask the tough questions,” says Stiles.
- **Set an example that leaders can use to create their own learning communities.** The Leadership Academy not only imparts a vision of leadership — including the principles above — but also embodies that vision. “We do a lot of modeling and debriefing,” Stiles notes. “We stop and say, ‘Why do you think we just did what we did?’” As one participant reflected, the Academy



modeled “how to identify the best staff development strategy and how to identify negative beliefs and work to change them.”

LASTING LEGACY

Many educators have taken these major messages of the Academy back to their own communities through *Leading Every Day: 124 Actions for Effective Leadership*, a best-selling book that is based on the Academy’s curriculum. *Leading Every Day* was selected as the National Staff Development Council’s Outstanding Book of the Year in 2003.

The Leadership Academy’s collaborative character is the legacy of the late Susan Loucks-Horsley, the WestEd professional development pioneer who founded the program. Created through a National Science Foundation grant, the program now is funded by tuition fees. The program occasionally receives grants such as a recent grant from the Susan Loucks-Horsley Fund for Educational Change.

A goal of the Academy is to support others to replicate the Academy’s curriculum in their local sites. Page Keeley’s academies in New England are not the only examples of participants building on WestEd’s model in their own states. The Dana Center at the University of Texas Austin created two replication academies in Texas. Two former fellows published a book that resulted from their collaboration through WestEd’s Academy. And another former fellow developed a leadership course for Washington educators based on WestEd’s National Academy. W

For more information, contact Deanna Maier at 520.888.2838 or dmaier@WestEd.org.

Reference: Waters, T., Marzano, R.J., and McNulty, B. 2003. *Balanced Leadership: What 30 Years of Research Tells Us About the Effect of Leadership on Student Achievement*. Aurora, Colorado: Mid-Continent Research for Education and Learning.

(continued from page 5)

important for teachers to learn about their students’ personal and academic backgrounds, cultures and learning styles, so that appropriate instruction can take place.”

Reading and discussing this case raises questions for educators about what they need to consider when working with diverse audiences. It emphasizes “the importance of respecting attitudes and beliefs that are different from your own, while still teaching what you need to teach,” Madfes says. “That is the crux of this work.”

“These cases are not *how-to* lessons,” she adds. “For the very specific and localized diversity issues with which teachers are struggling, a *how-to* guide isn’t realistic. Instead, these cases instigate conversation and help teachers find their own solutions, solutions that can help them bridge the gap with students — and each other.” W

For more information, contact Tania Madfes at 415.615.3103 or tmadfes@WestEd.org. What’s Fair Got To Do With It can be ordered online: www.WestEd.org/cs/view/rs/727.

What's Fair Got To Do With It: Diversity Cases From Environmental Educators

Tania J. Madfes (ed.)
(WestEd, EETAP, & NAAEE, 2004)



Educators, non-formal educators, and community organizations will find these cases fascinating reading and a powerful tool for professional development. While the cases are grounded in the experiences of a diverse group of environmental educators, the questions and issues they raise apply to education in general and society as a whole. Each case is a candid, dramatic, and highly readable first-person account that makes concrete the challenges of fairness, expectations, respect, and communication when people who share goals, perhaps, but not cultures, interact. With facilitator notes and commentary included, the casebook is designed to promote rich discussion and thoughtful reflection and to develop principles of practice that users can apply to their own work or volunteer settings.

122 pages / Price: \$21.50 / Order #: MS-03-01L

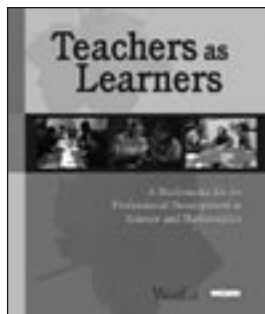
Number Sense and Operations in the Primary Grades: Hard to Teach and Hard to Learn?

Carne Barnett-Clarke, Alma Ramirez, Debra Coggins, & Susie Alldredge (eds.) (Heinemann, 2003)



This casebook enhances educators' understanding of mathematics and illustrates successful approaches to the most difficult topics related to math — ultimately leading to more effective instruction. Included are solutions to hard-to-teach topics such as place value, number sentences, basic facts, addition, subtraction, and regrouping. Following each lesson or “case” are facilitator's notes, which include case synopses, sample discussion issues, suggested materials, a starter problem, and an analysis of the most vital and provocative points in the case.

186 pages / Price: \$20 / Order #: MATH-03-01L



Teachers as Learners: A Multimedia Kit for Professional Development in Science and Mathematics

WestEd & WGBH Boston (Corwin Press, 2003)

This multimedia kit, which includes the best-selling *Designing Professional Development for Teachers of Science and Mathematics*, provides visual examples of a variety of professional development strategies (e.g., case discussions, coaching) as used with science and mathematics teachers. The kit contains everything needed to prepare staff developers to design effective activities, including videotapes of 18 programs illustrating the strategies and a CD-ROM with detailed facilitator's scripts, presentations, activities, and masters for overhead transparencies and handouts. For more information: www.WestEd.org/tal.

Multimedia / Price: \$399 / Order #: LI-03-02L

WestEd Resources ON SCIENCE AND MATHEMATICS

WestEd has a number of resources addressing science and mathematics education. A few are summarized here. For additional related products, please refer to the WestEd Resource Catalog 2004 or visit www.WestEd.org/catalog.

Learning and Teaching Linear Functions: Video Cases for Mathematics Professional Development, 6-10 (Facilitator's Package & Participant's Resource CD)

Nanette Seago, Judy Mumme, & Nicholas Branca (Heinemann, 2004)

These video-based resources help math teachers in grades 6-10 address some of the “problems of practice” associated with teaching linear functions. Based on videos of real classroom teaching, these materials better equip teachers to prepare and implement lessons that will help students develop conceptual understanding of linear functions. Teachers' own understanding of the subject will be deepened as they teach. The Facilitator's Package includes a facilitator's guide, a CD of resources, and a participant's CD with video clips and mathematical tasks that provide opportunities for teachers to consider the ideas involved in teaching algebra.

Facilitator's Package:Multimedia / Price: \$150 / Order #: MATH-04-01L

Participant's Resource CD:CD-ROM / Price: \$15 / Order #: MATH-04-02L

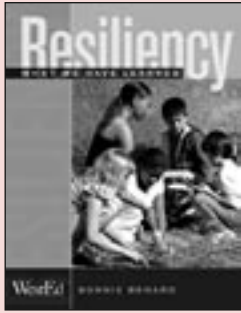


Weaving Science Inquiry and Continuous Assessment: Using Formative Assessment to Improve Learning

Maura O'Brien Carlson, Gregg E. Humphrey, & Karen S. Reinhardt (Corwin Press, 2003)

This book offers tools for monitoring and improving student achievement in the sciences. With over a decade of experience working with hundreds of science teachers, the authors, including WestEd's Maura Carlson, have developed a program that enables teachers to identify specific areas in which students are struggling and to modify teaching strategies to better support their learning. This continuous assessment also allows teachers to identify and address troublesome concepts before the state and local assessments are given and their results tabulated.

179 pages / Price: \$27.95 / Order #: LI-03-01L

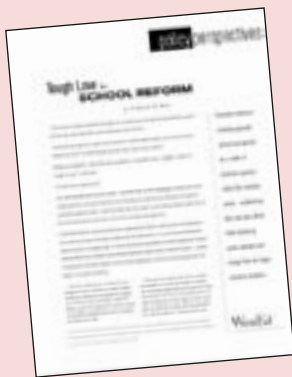


Resiliency: What We Have Learned

Bonnie Benard (*WestEd*, 2004)

This synthesis of more than a decade of resiliency research highlights the role that families, schools, and communities can play in supporting, and not undermining, children's and youth's natural capacity to lead healthy, successful lives. Of special interest is the evidence that resiliency prevails in most cases by far — even in extreme situations, such as those caused by poverty, troubled families, and violent neighborhoods. Benard also offers a practical and easy-to-read analysis of how best to incorporate the research findings in ways that support young people.

148 pages / Price: \$19.50 / Order #: HD-04-01L



Tough Love for School Reform (Policy Perspectives)

(*WestEd*, 2004)

According to Frederick M. Hess, Director of Education Policy Studies at the American Enterprise Institute, two kinds of reformers exist in American public education: “status quo reformers” and “common sense reformers.” Status quo reformers believe the nation's teachers and administrators are already doing the best they can and the only way to improve America's schools is to provide more money,

expertise, training, and support. Common sense reformers seek

to construct a culture of competence in schools: a culture where success is expected, excellence is rewarded, failure is not tolerated, and educators are given the freedom and flexibility to do their work. In this issue of Policy Perspectives, Hess details both approaches to school reform and offers a common sense reform agenda that rests on five pillars: tough-minded accountability, competition, workforce, leadership, and reinvention.

12 pages / Price: Single copy, free / Order #: PP-04-02L

Locally Tailored Accountability: Building on Your State System in the Era of NCLB (Knowledge Brief)

Eric W. Crane, Stanley N. Rabinowitz, & Joy Zimmerman (*WestEd*, 2004)

This Knowledge Brief provides a rationale for developing a local education accountability system that complements the state's federally prescribed effort under No Child Left Behind. The brief identifies the key decisions that must be made in creating a local system and identifies resources that can inform and help guide the process.

12 pages / Price: \$8 / Order #: KN-04-01L



The Culturally Proficient School: An Implementation Guide for School Leaders

Randall B. Lindsey, Laraine M. Roberts, & Franklin Campbell Jones (*Corwin Press*, 2005)

Leaders need to be responsive to different ethnic, linguistic, and religious subcultures or they will place many students at risk of being excluded from the benefits of a high-quality education. By valuing diversity and preserving the cultural dignity of students, cultural proficiency enables educators to create an inclusive and instructionally powerful learning environ-

ment. *The Culturally Proficient School* provides the practical strategies, tools, and resources needed to successfully implement cultural proficiency throughout an organization. Providing many opportunities for discussion and contemplation, this book features: reflective activities for individuals or groups; sample conversations around issues of diversity, multiculturalism, equity entitlement, and racism; typical behaviors associated with culturally proficient leadership organized around the responsibilities of school leaders; and professional development activities. By using diversity as an educational resource, cultural proficiency dramatically increases the likelihood that all students will be successful learners. Designed primarily for principals, assistant principals, and other school-based leaders, this innovative field book is a perfect resource for leadership academies.

170 pages / Price: \$30.95 / Order #: LD-04-01L

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