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Finders, Keepers

Policies to Help Rural Schools Recruit and Retain High-Quality Teachers

Rural school districts face some major challenges when it comes to finding and keeping teachers, such as geographic and cultural isolation, salaries that are generally lower than those offered elsewhere, and multiple certification requirements in schools where teachers must teach multiple grades or subjects. The No Child Left Behind Act of 2001 (NCLB) may exacerbate the problems by increasing the competition for highly qualified teachers.

Last spring, AEL partnered with the American Association of School Administrators (AASA) to conduct a nationwide, online survey of more than 3,000 rural school superintendents. This project revealed the challenges rural school system leaders face in staffing their schools, and prompted a review of the contexts and factors that contribute to these challenges. An AEL policy brief based

on the review and survey suggests ways to address teacher supply-and-demand problems. (Although these efforts focused on rural situations, many of the challenges and strategies may apply to other hard-to-staff schools, such as those in inner cities.)

The Survey Results

The AASA-AEL survey provided information about how rural school districts are meeting the teacher quality requirements of NCLB. The survey was conducted to assess the level of urgency—are rural teachers currently highly qualified?—as well as to ascertain the strategies in use to recruit and retain teachers in rural areas. Analysis of the 896 valid responses provides insight into two major concerns: (1) the negative effects of low salaries and social and geographic isolation and (2) teacher shortages in special

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Free from AEL

Our Web site has a new look and lots of resources for teachers, administrators, and policymakers. See a sampling on the catalog insert in this issue. Then, visit www.ael.org.



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Finders, Keepers

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Defining Highly Qualified

The NCLB

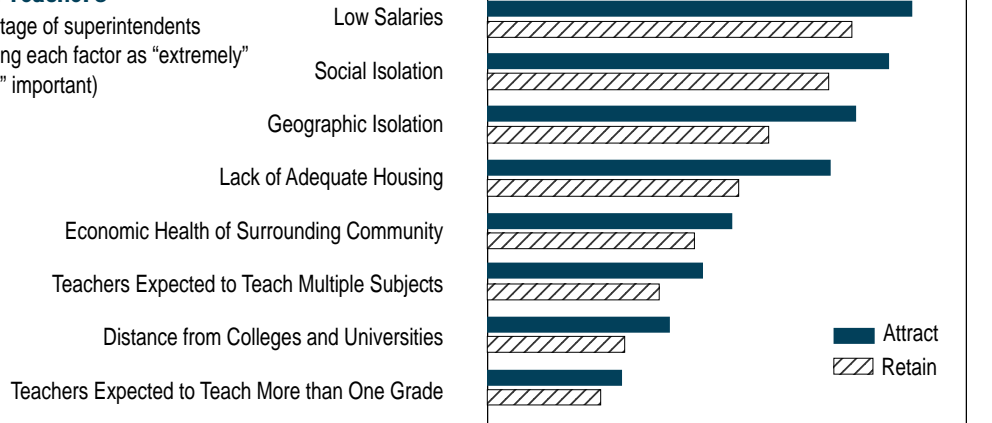
definition says that, by the end of 2005-06, teachers must be fully certified by the state in which they are teaching, hold at least a bachelor's degree, and demonstrate subject-matter competence in each of the core academic subjects they teach.

Teachers with emergency, temporary, or provisional certificates do not meet the federal definition.

Early in 2004, after the survey was conducted, new federal policy guidelines eased these requirements for rural teachers. Now teachers in eligible, rural districts who are highly qualified in at least one subject will have three years to become highly qualified in the additional subjects they teach. They must be provided professional development, intense supervision, or structured mentoring to become highly qualified in the additional subjects.

Factors That Make It Difficult to Attract or Retain Teachers

(percentage of superintendents identifying each factor as "extremely" or "very" important)



Source: *How Are Rural School Districts Meeting the Teacher Quality Requirements of No Child Left Behind*, 2003, AASA and AEL.

education (K-12) and math, science, and foreign languages (grades 7-12).

While rural superintendents indicated that high numbers of teachers would meet the federal criteria for being "highly qualified," their responses also revealed a lack of clarity about what exactly that definition means, particularly for their own states. Survey respondents also indicated fairly high levels of multiple-subject teaching and expressed particular concern about middle school teachers, for whom K-8 certification may no longer be enough. The smaller the district, the higher the numbers of teachers not highly qualified, teaching multiple subjects, and likely to be lost if NCLB definitions are enforced (see box at left).

Incentives such as mentoring and induction programs, tuition reimbursement, and bonuses for National Board certification were the most frequently cited strategies for improving recruitment and retention. Also cited were training opportunities and a variety of recruiting strategies.

The Policy Suggestions: Not Just for Policymakers

A review of research reports, data analyses, surveys, and reports from national education organizations produced the following suggestions for rural education

leaders. Some require policies and actions to be taken at the state level, but several can be promoted by teachers and principals in their own communities, classrooms, and districts.

- **Improve incentives for teaching in hard-to-staff rural schools.** To be effective, financial incentives must strategically target teachers willing to teach where the need is greatest: high-poverty schools, remote areas, or hard-to-fill subject areas. The Rural School and Community Trust recommends (1) seeing that rural teacher salaries and benefits are comparable to those offered in suburban and urban areas, (2) providing additional financial incentives in hard-to-staff rural districts, and (3) having the federal government play a substantial financial role in supporting the recruitment of highly qualified teachers.¹

- **Promote improved recruitment and hiring practices.** Targeted marketing that emphasizes the advantages of living and teaching in rural communities has been underused. Such outreach should be supplemented by modernized techniques that reduce paperwork for applicants (e.g., only three states have a common application form that can be used in any district).² When it comes to hiring, applicants should have more opportunities for interaction with teachers and two-way information exchanges.³

• **Require and finance comprehensive induction programs.** Studies show that such programs greatly decrease the likelihood of new teachers quitting in the first year.⁴ In rural schools, induction programs can also play an important role in helping new teachers establish connections within the broader community served by the school.

• **Nurture local talent.** The Southeast Center for Teaching Quality identifies “developing local talent” as a key component of the hard-to-staff school solution. It is important for policymakers to offer programs that improve access to teacher education programs for individuals in a variety of situations: high school students, out-of-field teachers, school paraprofessionals, and second-career adults.⁵ Such efforts will need to take into account, and counter, the comparatively low postsecondary aspirations and enrollment among rural students, compared to their urban and suburban peers.⁶ Nurturing local talent can require greater collaboration among school districts and postsecondary institutions, increased use of distance learning in remote districts, establishment of clearly defined career paths for local residents, and targeted outreach efforts.

• **Foster greater collaboration among public**

school systems and postsecondary institutions. As certification requirements tighten under NCLB, teachers in rural areas will need to gain access to classes to fulfill their requirements. Teachers in the most remote areas may need to rely on distance-learning courses. In rural areas, community colleges may play a key role.⁷ Federal and state policymakers could provide assistance and incentives for creating alliances among school districts, community colleges, and nearby universities.

• **Create avenues for greater community involvement.** Some states are encouraging communities to assume greater responsibility for attracting teachers. This makes sense, as involving a rural teacher in local programs—and thereby connecting him or her in a way that might discourage leaving—can only be done by the local school and community members. First steps might include initiating a school-community orientation for new teachers and finding other ways to welcome and include them.⁸

• **Support high-quality research on rural education issues.** Without such research, important questions remain unanswered and successful strategies and policies remain unidentified.⁹

Finders, Keepers

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Read All About It

The survey report, *How Are Rural School Districts Meeting the Teacher Quality Requirements of No Child Left Behind?* by Terri Duggan Schwartzbeck and Cynthia D. Prince with Doris Redfield, Helen Morris, and Patricia Cahape Hammer, is available online at www.ael.org/page.htm?&index=768&cpd=1.

To read the Policy Brief, *Recruiting and Retaining High-Quality Teachers in Rural Areas* by Carla Thomas McClure, Doris Redfield, and Patricia Cahape Hammer, go to www.ael.org/page.htm?&index=764&cpd=1.

References

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2. National Commission on Teaching and America's Future, *No Dream Denied: A Pledge to America's Children* (Washington, DC: NCTAF, 2003), 11.
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4. State Support for New Teachers [chart], Quality Counts 2003: "If I Can't Learn from You. . ." (*Education Week*, January 9, 2003), www.edweek.org/sreports/qc03/reports/17support-tl.cfm; NCTAF, *No Dream Denied*, 11; and T. M. Smith and R. M. Ingersoll, *Reducing Teacher Turnover: Do Induction and Mentoring Programs Help?* (paper presented at the annual meeting of the American Association of Educational Research, Chicago, IL, April 2003), summarized in the May 2003 issue of *Teaching Quality Research Matters*, www.teachingquality.org/ResearchMatters/Rmindex.htm.
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9. Jimerson, *The Competitive Disadvantage*, 15-18; ECS, *Eight Questions on Teacher Preparation: What Does the Research Say? A Summary of Findings* (Denver, CO: Author), 5, www.ecs.org/tpreport; and Southern Regional Education Board, *Oklahoma Educator Supply and Demand Study* (Amherst, MA: Data Decision and Analysis, 1998), www.okhighered.org/techsupply.html.

Research Notes

The U.S. Department of Education's Institute of Education Sciences funds research through regional laboratories, national centers, and field studies.

Research from the nation's 10 regional laboratories can be found on the Internet at www.relnetwork.org.

The work of the 12 national centers is available at <http://research.cse.ucla.edu>.

Students Learn More from National Board Certified Teachers

From the Center on Reinventing Public Education

In March, an independent research team released findings showing that National Board Certified teachers (NBCTs) are more likely than other teachers to improve student achievement as measured by North Carolina's standardized testing system. The research team, from the University of Washington and the Urban Institute, used a sophisticated value-added model built from 600,000 North Carolina elementary student test scores during a three-year period.

In particular, the study concluded that teachers being national board certified is positively related to

- raising student achievement more than teachers who pursue, but fail to obtain, National Board for Professional Teaching Standards (NBPTS) certification
- raising student achievement—outside of the year in which they apply—more than teachers who do not pursue NBPTS certification
- having a greater impact with younger students
- having a greater impact with low-income students

The younger and lower-income students of National Board Certified teachers had learning gains as high as 15 percent more than students taught by teachers who pursued but failed to gain national board certification. Average gains for math and reading test scores were 7 percent higher. The results of this large-scale study confirm that the NBPTS process identifies teachers who systematically produce larger achievement gains.

By assembling a wide range of data on the teachers in the sample, the research team

drew conclusions about the relationship between teacher characteristics and student achievement. They found these factors to be important to test-score growth: (a) years of teaching experience, (b) having a master's degree, and (c) holding a "continuous" teaching license (as opposed to a provisional, temporary, or initial license).

The authors' analysis says the research does not show that the NBPTS process itself makes teachers better, but the process does appear useful in identifying which teachers are more effective. While the cost effectiveness of this approach for identifying and rewarding accomplished teachers has yet to be determined, benefits related to the National Board process may appear. Additional research may find that certification helps to keep the best teachers in the classrooms.

To conduct their study, the researchers assembled and sorted a complex data system. They used North Carolina state test scores from 1996-97 to 1998-99 and constructed controls for student background and socioeconomic status, teacher background, school and district characteristics, and community factors to control for the value added to student achievement by NBCTs. Teachers were matched with third-, fourth-, and fifth-grade student test score information across the three years, and national board certification status was drawn from a national database. The study was funded by the U.S. Department of Education.

For a copy of *Can Teacher Quality Be Effectively Assessed?* by Dan Goldhaber and Emily Anthony, and more information on the study, visit the Center on Reinventing Public Education Web site at www.crpe.org/workingpapers.shtml#quality.

The Principal's Role in Teacher Retention

From Charlotte Advocates for Education

Each year, 15 to 20 percent of the teachers in Charlotte-Mecklenburg Schools (CMS) leave their jobs. Each time a teacher leaves, CMS estimates the cost of recruiting, hiring, and providing orientation and professional development for the replacement at \$11,500. The cost to students is even higher with the lack of stability and the loss of teaching expertise.

Charlotte Advocates for Education (CAE), a local independent nonprofit, searched the teacher retention literature to determine what the important factors might be. National and local research indicated that working conditions most often affected teachers' decisions. One important component of working conditions was the principal and his or her leadership in the school.

CAE sought to understand the relationship between principals and teacher retention by studying CMS principals, particularly those in high-needs schools, who were successful in retaining teachers while increasing student achievement. Twenty principals who fit the criteria were identified and sent surveys; their responses revealed common themes. To gain deeper understanding of the themes, the researchers invited the principals to participate in focus groups centered on key issues. Data from the surveys and focus groups were then analyzed.

The CAE study made observations about several characteristics and strategies common to the effective principals:

- Principals who have been more successful in retaining teachers have characteristics of successful entrepreneurs. They are
 - visionary leaders who can conceptualize goals for their schools and operationalize necessary plans

- risk-takers, albeit cautious ones, who value research and data, can analyze data rapidly, synthesize important information, and make good decisions quickly
- self-motivated and tenacious in doing what it takes for their schools to succeed
- problem solvers
- committed to and passionate about their profession
- These principals believe strong, instructional, operational, and strategic leadership are equally important. However, operational issues dominate much of their time, leaving too little time for instructional leadership.
- These principals value teachers as individuals and sincerely want them to succeed and grow. Their most successful strategies are those that give direct assistance to teachers. These principals
 - give continual feedback
 - find ways to provide professional development
 - ensure teachers have opportunities to work collaboratively and to increase leadership abilities
 - actively involve teachers in meaningful decision making
 - use discretionary dollars to provide personnel who support and assist teachers
- Principal preparation and continuing professional development must include practical information as well as theory.

To read the February 2004 report, *Role of Principal Leadership in Increasing Teacher Retention: Creating a Supportive Environment*, visit www.advocatesfored.org/publications.htm.

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Research Notes

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Research Resource

From the National High School Alliance

Secondary school reform is the focus of a new online product for educators, policymakers, administrators, and researchers. The *Catalog of Research on Secondary School Reform* collects information about emerging research on high schools, middle schools, and high school-aged youth.

Organized by three categories—implementation, effectiveness, and policy—the PDF catalog includes entries for individual studies. Each entry includes contact information for the author/organization, the topic or working title of the study, purpose/research question, time frame, and amount/source of funding. Visitors can follow hotlinks from an entry to the organization conducting the study and/or the initiative being studied.

Created by the Institute for Educational Leadership and funded by the Bill & Melinda Gates Foundation, the catalog is at www.hsalliance.org/research/index.asp.

Research Notes

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Gender Equity in STEM

From the American Association of University Women (AAUW) Educational Foundation

In the past 10 years, the AAUW Educational Foundation and the National Science Foundation (NSF) have invested nearly \$90 million to fund hundreds of projects aimed at increasing the participation of girls and women in science, technology, engineering, and mathematics (STEM). The organizations wanted research on this body of projects to address these questions:

- What can be learned from a decade of gender equity efforts in the sciences?
- What types of gender equity projects in the sciences have been supported and promoted during the past decade?
- Which STEM disciplines and project approaches have been favored and which have been overlooked?

A team of researchers from the University of California looked at 416 research and intervention projects sponsored between 1993 and 2001 by the AAUW and the NSF. Their recently released report reveals significant trends and offers recommendations for strengthening the advancement of gender equity in STEM subjects. Here are key findings and recommendations:

- **An abundance of impressive but discrete projects reveals the need for more integrated and wide-reaching efforts.** The collection of projects illustrated a wide range of impressive efforts but few relationships and connections between and among projects. Broader and more strategic approaches are needed.
- **Extracurricular approaches were common and suggest the need to integrate STEM gender equity into the formal, in-school curriculum.** While extracurricular activities (e.g., visits to science museums and manufacturing plants, field trips to nature reserves, and meetings with professionals in STEM fields) have proven effective in advancing

girls' interest in STEM fields, greater attention should be paid to infusing gender equity STEM activities into the formal school curriculum.

- **A primary focus on increasing student interest and awareness suggests the need for more emphasis on academic content and advanced skill development.** Preparation in early grades followed by a high school curriculum of high academic rigor is crucial in ensuring equal opportunity in the sciences at the college level and beyond.
- **Professional development was a common approach and should be improved and expanded.** Activities that strengthen science literacy, integrate technology, and promote gender equity awareness should receive more support. Professional development should also include higher education faculty and counselors (most projects provided professional development aimed at K-12 teachers).
- **Projects benefited both genders.** More than 40 percent of projects included boys and girls. Project evaluations indicated that all enjoyed and benefited from STEM activities with explicit gender equity goals.
- **Data collection and project evaluation should be emphasized in future efforts.** Projects documented participants by gender but otherwise provided scant information. To address the needs and interests of under-represented groups, educators need to know what works *and* what works for whom. Similarly, most projects did not report measurable outcomes, suggesting a lack of skills in data collection and project evaluation. Funders should provide resources and opportunities for participants to gain skills.

Under the Microscope: A Decade of Gender Equity Projects in the Sciences, released in March 2004, is available online at www.aauw.org/research/microscope.cfm; download a free PDF copy or purchase a print copy for \$12. For more information, contact the AAUW by phone at 800-326-2289 or by e-mail at info@aauw.org.

Evaluating Research for Policy

The Education Commission of the States (ECS) and Mid-continent Research for Education and Learning (McREL) have launched an online tool to help policymakers, education leaders, reporters, and others better understand and evaluate education research. The interactive, online primer helps users answer three questions: (1) What does the research say? (2) Is the research trustworthy? (3) How can the research be used to guide policy?

Answering these questions can help policymakers make evidenced-based decisions, better understand research methods, and become more informed consumers of research.

Funded through grants from the U.S. Department of Education, *A Policymaker's Primer on Education Research: How to Understand, Evaluate, and Use It* by Patricia Lauer can be found at www.ecs.org/html/educationIssues/Research/primer/index.asp.

Toolkit for Managing Change

The Change Toolkit from IBM's Reinventing Education project offers assistance as schools seek to become more dynamic, innovative, and energized. This interactive, Web-based environment offers schools research-based information, diagnostic tools, discussion areas, and private workrooms to plan and manage a school change initiative.

The toolkit consists of three major sections—the Change Wheel, Change Masters, and Change Fundamentals—each of which has a number of topics. Individual diagnostic tools help a school analyze its situation with respect to these topics. An additional tool helps users assess the overall adequacy of a change project, with items that ask about the levels of shared knowledge and aspirations, design of policies and procedures, existence of measures and milestones

for marking progress, and so on.

If a change initiative is in the planning stage, the toolkit's launch track supports change leaders with tools that help them inspire vision, put together a steering committee, line up people resources, and more.

To learn more about the IBM Reinventing Education Change Toolkit, visit www.reinventingeducation.org/RE3Web.

Top Science Trade Books

The National Science Teachers Association, in conjunction with the Children's Book Council, has released the annual list of Outstanding Science Trade Books for Students K-12. The list represents the best science trade books published in 2003. Nearly 50 titles were selected and 12 achieved Selectors' Choice status.

Each entry includes a brief description of the book; the name of the publisher and current price; and recommended reading levels, including Primary (K-2), Elementary (3-5), Intermediate (6-8), and Advanced (9-12). The list is arranged by seven topical categories: archaeology, anthropology, and paleontology; biography; earth and space science; environment and ecology; life science; physical science; and technology and engineering.

The Outstanding Science Trade Books for Students K-12 appears online at www.nsta.org/ostbc.

Pocket PCs in the Classroom

Pocket PCs are inexpensive, media-ready, and have improved displays and software options, making them a tool of choice in many classrooms. To help teachers make the best use of this technology, the International Society for Technology in Education (ISTE) published *Pocket PC Computers—A Complete Resource for Class-*

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Resources of Interest

Teaching with Technology Exhibits

The National Board for Professional Teaching Standards recently upgraded the importance of technology use for excellent teaching. To help all teachers understand more about integrating technology into instruction, the board selected several teachers and underwrote their costs for preparing exhibits and lesson plans.

The resulting Digital Edge Learning Interchange presents 58 exhibits that include all school levels and many subject areas. The exhibits are available free at a Web site operated by Apple Computer, Inc.

To visit, go to www.ali.apple.com/deli.

Resources of Interest

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Web Site on Character Development

The U.S. Department of Education's Office of Safe and Drug-Free Schools recently unveiled its Web site for the Character Education and Civic Engagement Technical Assistance Center (CETAC).

The center aims to provide assistance for implementing effective character education and civic engagement programs to grantees of the Partnerships in Character Education Program and to serve as a resource for educators, parents, and the community at large. The site includes links to

- news and events related to recent developments in character education and civic engagement
- a resource center that features key publications
- a message board for Partnerships in Character Education Program grantees

Visit the site at www.cetac.org.

room Teachers. Written by members of the University of Michigan's Center for Highly Interactive Computing in Education (Hi-CE), this practical book shows how to plan, implement, and manage a classroom Pocket PC program.

Topics include setting up and managing a mobile classroom, choosing software and accessories, and building lesson plans with Pocket PC software. Included with the book is a CD-ROM of freeware developed by Hi-CE.

Find the table of contents and an excerpt on the ISTE Web site at www.iste.org/bookstore. The book may be purchased online for \$39.95; the price for ISTE members is \$35.95.

Family and Community Engagement

For many middle school students, particularly students from low-income families and students of color, a significant disconnect exists between the worlds of school, family, and community. A new guide helps schools and teachers bring these diverse worlds together and recognize the assets and strengths inherent in each. *Creating Partnerships, Bridging Worlds: Family and Community Engagement* provides resources, models, and tools to help schools create a framework for family and community engagement.

The framework, based in part on the work of Dr. Joyce Epstein at the National Network of Partnership Schools, Johns Hopkins University, consists of several elements: parenting, communicating, volunteering, supporting student learning at home, inclusive decision making, and collaborating with the community.

Find the guide at www.turningpts.org/guides.htm.

Virtual Space Exploration

Slooh, an online service that offers live viewing of outer space, recently announced the introduction of missions to the Orion

Nebula, the Andromeda Galaxy, and the Moon. These live, interactive missions enable the general public to directly experience high-quality astronomical conditions.

Slooh has positioned high-powered telescopes at 7,900 feet on Mt. Tiede in the Canary Islands. The telescopes, stationed five hours ahead of Eastern Time, enable members to see the night skies during daylight hours in the United States. Most missions are 5 to 15 minutes long and each presents a live view of an object in the universe. During the mission, storytellers explain the history, mythology, science, and beauty of the object being observed.

Slooh is available for a seven-day free trial. Basic annual membership costs \$49, but, for a limited time, Slooh is giving annual memberships to schools. To learn more, visit www.slooh.com.

New Diversity Resources

The Center for Research on Education, Diversity & Excellence (CREDE) recently announced two new books for educators.

Designing Effective Activity Centers for Diverse Learners: A Guide for Teachers at All Grade Levels by R. Soleste Hilberg, Ji-Mei Chang, and Georgia Epaloose is a step-by-step reference guide for designing and implementing activity centers in K-8 classrooms. Included are strategies for effective differentiated instruction for diverse learners. The book can be used with teacher education courses or by individuals who want to learn this approach to differentiated instruction on their own. The book provides a brief overview of theory and the how-to's of implementing activity centers.

A rich array of cross-curricular classroom examples helps the reader visualize the concepts. These examples are drawn from more than 14 years of field-testing by instructors and CREDE researchers. The book costs \$20 and can be ordered online at www.cal.org/crede/pubs.

Observational Research in U.S. Classrooms: New Approaches for Understanding Cultural and Linguistic Diversity edited by Hersh C. Waxman, Roland G. Tharp, and R. Soleste Hilberg offers theoretical frameworks and substantive research findings on classroom observation. Also included are some classroom observation instruments, developed through research on effective teaching practices for culturally and linguistically diverse students. Eleven chapters offer perspectives on classroom observation research that will help educators improve U.S. schools. The book costs \$25. To order, visit www.amazon.com/exec/obidos/ASIN/0521891426/credecenteforres/103-9451966-8042203.

Diversity and Community Connections

No matter their race, ethnicity, culture, or income, most families have high aspirations and concerns for their children's success. This is one of the findings included in the latest research synthesis from the Southwest Educational Development Laboratory's National Center for Family and Community Connections with Schools.

The synthesis, *Diversity: School, Family, and Community Connections*, discusses 64 research studies that looked at roles families can play in improving academic achievement among minority, immigrant, and language minority students, and students from low-income families.

This synthesis explores barriers to involvement for minority and low-income families, strategies that have been used to address those barriers, and recommendations local education leaders can adapt to address their specific needs, including the following:

- Adopt formal school- and district-level policies that promote family involvement, including an explicit focus on engaging families who reflect the full diversity of the student population.
- Demonstrate active and ongoing support

from the school principal.

- Acknowledge both commonalities and differences among students and families.
- Provide help for immigrant families to understand how schools work and what's expected of families and students.
- Recognize that it takes time to build trust.

The diversity synthesis can be downloaded free at www.sedl.org/connections/research-syntheses.html. Print copies may be purchased for \$20 by calling 800-476-6861, ext. 201, or e-mailing products@sedl.org.

Technology for Time-Crunched Administrators

School administrators often suspect that many tasks in their jam-packed days could or should be automated, but they can't find the time. A book from the International Society for Technology in Education (ISTE) may provide the solution. *The Electronic Briefcase for Administrators—Tools and Templates* is designed to help busy administrators strengthen their data-handling and reporting skills.

For those with little or no personal technology proficiency, the book provides basic instruction on software tools that can be used to complete everyday administrative tasks. For those with more experience with productivity software, the publication provides ready-made templates to use immediately. The accompanying CD-ROM includes more than 35 templates, organized around the National Educational Technology Standards for Administrators, that can help education leaders automate tasks and manage their workloads more effectively.

The book can be purchased online for \$34.95 for ISTE members (\$39.95 for nonmembers). More information, an excerpt, a table of contents, and ordering information are available at www.iste.org/Bookstore/index.cfm.

Resources of Interest

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Grant Opportunities

For more information on grant programs, funding sources, and technology funding, visit the AEL Web site at www.ael.org or the School Grants Web site at www.schoolgrants.org.

Consider also watching the Federal Register, published every weekday, at www.access.gpo.gov/su_docs/fedreglfrcont04.html.

Target: Arts in Education Grants

Purpose: To help give students opportunities to explore, experience, and create visual art, music, and drama.

These grants bring artists and students together by bringing performers to schools, sending students to see performances or exhibitions, and giving kids a chance to participate in arts workshops. Schools award the grants, which usually range from \$1,000 to \$3,000, so the funds go where they'll make the biggest difference in the local community.

Deadline: May 31

Target also awards more than 600 All-Around Scholarships each year—including one \$25,000 scholarship—to high school seniors and college students age 24 and younger. Scholarships recognize volunteer work as well as academic achievement, encouraging students to go beyond what can be learned from textbooks.

Application information available online at http://target.com/target_group/community_giving/index.jhtml.

Nike and Michael Jordan: Jordan Fundamentals Grants

Purpose: To benefit, recognize, and reward teachers in underprivileged schools who strive beyond challenges and limited resources to achieve excellence through instructional creativity, innovative teaching, and high learning expectation for students.

Teachers working in grades 1-12 are now eligible to apply for one of 400 grants of \$2,500 each.

Deadline: June 15

Application and information available online at www.nike.com/nikebiz/nikebiz.jhtml?page=26.

Dana Foundation: Performing Arts Professional Development Grants

Purpose: To support innovative professional development programs leading to improved teaching of the performing arts in public schools.

Within this broad field, the foundation is interested primarily in training for in-school arts specialists and professional artists who teach in the schools. The foundation supports projects that originate in New York City; Washington, DC; Los Angeles; and their surrounding areas within a 50-mile radius.

Deadline: Letters of intent may be submitted at any time.

Application and information available online at www.dana.org/grants/artseducation.

Major League Baseball & Players Association: Baseball Tomorrow Fund

Purpose: To promote and enhance the growth of baseball in the United States, Canada, and the world by funding programs, fields, and equipment purchases to encourage and maintain youth participation.

Nonprofit and tax-exempt organizations involved in youth baseball and softball programs may apply. Before requesting a grant, send a brief letter of inquiry to determine whether the project meets the guidelines. Letters of inquiry may be submitted at anytime; however, please allow at least one month for the review.

Deadlines: January 1, April 1, July 1, and October 1

Application and information available online at http://mlb.mlb.com/NASApp/mlb/mlb/official_info/community/btf.jsp or by writing Baseball Tomorrow Fund, 245 Park Avenue, New York, NY 10167.

National Geographic Society Education Foundation: Teacher Grants

Purpose: To facilitate educators' work in the classroom, school, district, and community.

This year the foundation will place a special emphasis on cultural connections. Particularly encouraged are projects that promote understanding of and respect for differences between cultures, as well as exploration of students' own heritage. The foundation is most interested in high-impact projects that seek to improve student achievement through geographic literacy. Projects should include one or more of the following strategies:

- exploring the world's many cultures
- exploring uses of new technologies
- expanding student experiential-learning opportunities
- engaging families and/or communities in education

The foundation plans to make approximately \$100,000 in grants of up to \$5,000 each. Current teachers and administrators in accredited K-12 schools within the United States and Canada may apply.

Deadline: June 10

Application and information available online at http://nationalgeographic.com/education/teacher_community/get_grant.html#anchor_3.

Gannett Foundation: Education Grants

Purpose: To improve the education, health, and advancement of people who live in Gannett communities.

Local organizations in communities where Gannett Co., Inc. has a local daily newspaper or television station (listed at the following Web site) are eligible to apply. The foundation values projects that take a creative approach to such fundamental issues as education and neighborhood improvement,

economic development, youth development, community problem solving, environmental conservation, and cultural enrichment.

Deadline: Contact local companies for deadlines in your area.

Application and information available online at <http://gannettfoundation.org>.

American Association of Physics Teachers: Apparatus Competition

Purpose: To encourage the invention of new laboratory apparatuses.

This year, entries must fit one or both of two categories: (1) low cost—costs less than \$65 to build and/or (2) introductory laboratory, which includes high school level. An apparatus must be either new in design or a modification of an existing design, and not commercially available. The specifics of the apparatus may not have been published. Judging will be held on August 1, during the annual meeting of the association. Participants do not need to be association members, nor do they need to be present to win.

The competition is supported by PASCO Scientific, which donates cash prizes. Past awards for the Introductory Laboratory competition were: 1st Place, \$1,000; 2nd Place, \$600; and 3rd Place, \$200. In the Low Cost competition, five equal prizes of \$100 were awarded.

Deadlines: **June 1**—Notification of intent to enter

July 1—Application

Application and information available online at www.aapt.org/Contests/apparatus.cfm or www.personal.psu.edu/faculty/r/e/ref7/apparatus. You may also contact AAPT Apparatus Competition, Richard Flarend, Penn State Altoona, 3000 Ivyside Drive, Altoona, PA 16601; fax: 814-949-5011; e-mail: ref7@psu.edu.

Corporation for National and Community Service: Peer Reviewers and Facilitators

Purpose: To identify qualified candidates to act as reviewers and facilitators for future grant cycles.

The corporation uses reviewers to read applications, analyze application quality, and rate based on published criteria. Peer reviewers help in determining which program applications to fund.

Educators willing to be peer reviewers and/or facilitators are invited to take an online survey to identify their interests and areas of experience. As their services are needed, they will be contacted.

The corporation is part of USA Freedom Corps, a White House initiative.

Deadline: Ongoing
Get information by writing the Corporation for National and Community Service, 1201 New York Avenue, N.W., Washington, DC 20525; by e-mail from peerreviewers@cns.gov; or online at www.nationalservice.org/egrants/peerreview/index.html.

Resources of Interest

(continued from page 9)

Meeting Standards Through Integrated Curriculum

by Susan M. Drake and Rebecca C. Burns

AEL's Rebecca Burns collaborated with Susan Drake, a professor on the education faculty at Brock University in Ontario, Canada, on this new book. The authors offer strategies for synchronizing standards across the disciplines. Often lost in the conversations about accountability these days are questions like these that are dearest to teachers' hearts:

- How do students learn best?
- How do different teaching strategies affect learning?
- Under what conditions are students motivated to learn?
- How can we plan learning experiences to optimize learning?

This book aims to help teachers find

answers to such questions. It also provides educators with approaches to standards-based, integrated curriculum that are both rigorous and relevant; offers proven strategies for implementation; and validates interdisciplinary curriculum by offering examples of interdisciplinary work that provide data-based evidence of success.

Through a generic "formula" for creating an interdisciplinary curriculum and examples of how to implement it in practice, plus stories of educators who have successfully combined integrated teaching with standards-based testing, the book helps readers cover the standards and support student learning.

To read selections from the book online or to order it (softcover, 172 pages, members \$19.95, nonmembers \$24.95), visit the Association for Supervision and Curriculum Development Web site at www.ascd.org.

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