Researching Their Own Practice

Network, conference bolster action research

Realizing that spreadsheets are a tool many of her students will use later in life, Nancy Smith decided it was time to add spreadsheets to her elementary math curriculum. First, she learned LOGO computer language, then she redesigned her syllabus, and now her young students are designing their own spreadsheets.

Teachers like Smith analyze their practice and modify it, sifting and winnowing new ideas. Through action research, she takes responsibility for her own professional development. As she broadens her capabilities, she helps her peers along their way.

Nancy is one of many teachers helping make Madison, Wisconsin, a hotbed of action research, according to Ken Zeichner, education professor at the UW-Madison. Zeichner helped organize the Madison Area Action Research Network in Southern Wisconsin, along with several other UW-Madison School of Education faculty and Madison Metropolitan School District teachers and staff developers.

Some teachers participating in the network have published results of their action research in national journals including Teaching and Change and The Elementary School Journal. Two researchers from the National Center for Research on Teacher Learning will interview participating teachers in a national study of the effect of doing action research.

Elementary school teacher Nan Youngerman explains that action research begins with teachers asking questions about their day-to-day practice. "It's not somebody sitting off somewhere making policy," she says. "Action research teachers interact with academic researchers, and we influence their work." Youngerman says participating in action research makes her feel more excited about teaching. "I've increased my knowledge, and so have most of the teachers I'm involved with," she says.

Youngerman coordinates action research group meetings that open doors to professional development. "We teachers don't have time to talk to each other during the normal school day," she says. "But action research group meetings provide that time." Each group has a particular focus; Youngerman's group concentrates on technology in the classroom. Each group meets at times most convenient for its members; one may meet three hours once a month after school; another may meet during released time during the school day.

Attending action research meetings requires a tremendous time commitment, Youngerman says, but teachers make the investment because of the payoffs. "At first the groups may appear to consist of 10 different teachers asking 10 different questions," Youngerman says, "but common themes come up. For example, how can we integrate new math standards? What's the best way to support teachers? What if the teacher knows less than the kids about a certain topic? What new kind of learning does technology offer us?"

Despite the extra effort required, attending the meetings energizes teachers, Youngerman says. "Their groups offer them a supportive setting of reflection and interaction with colleagues. Yes, it's extra work, but they want the experience because there is a payoff."

The Madison Metropolitan School District (MMSD) supports the network in thought and deed. MMSD staffers Cathy Caro-Bruce and Jennifer McCreadie help arrange for teachers to be freed from classroom time to do their own research. The District pays for six days released time per year for each participating teacher. The time is invested in half-day and full-day meetings during the school year, at which teachers discuss their projects and their concerns with peers.

The 1993 Madison Area Action Research Conference attracted 175 participants. The 1994 conference, planned for April, will build on its success.
Jennifer McCreadie says teachers who are already thoughtful and reflective become more so through action research. They receive more support for pursuing systematic inquiry into their practice. "Day-to-day teaching is so pressured that it's difficult to pursue any systematic collection of data," she says. "Action research makes it more likely they will be systematic."

The first conference
For some time action research groups had operated in Madison and vicinity, but they were scattered. There was no event to bring them together. The time was ripe for the first Madison Area Action Research Network Conference. Held in April, 1993, it was organized and co-sponsored by the Madison Metropolitan School District, the UW-Madison, and the Wisconsin Center for Education Research.

Welcoming newcomers to action research, as well as veterans, the conference attracted administrators, support staff, student teachers, and university faculty. It was the first time these disparate groups had been brought together, Zeichner says. Panelists discussed topics as general as "How action research has affected my practice" and as specific as "Mathematical development from K through 3"; "Assessing and reporting student progress in an integrative classroom"; and "Attitudes regarding decision-making in an elementary school."

The conference recognized teachers who had invested in themselves, says Youngerman. In turn, they shared their valuable findings with colleagues. For example, one teacher talked about using student journals to help her understand and teach kids from different backgrounds. The students provided information about themselves in their journals that hadn't come out in classroom discussions.

"Some teachers came up to me at the end of the conference," Zeichner says. "They said they were glad that teachers' knowledge was being valued. They wondered why conferences like this one hadn't happened before. They felt that they were really in control. They expressed interest in playing a greater role in teacher education programs."

One teacher from Beloit, Wisconsin, returned home to organize a new action research group there for student teachers at Beloit College.

"Teachers become leaders through participation," Youngerman says, "and the conference was a point in the process—a milestone."

"That conference is one of the best things to happen during my 18 years here," Zeichner says. "The 1994 conference we're planning promises to be even bigger."

The network
Teachers' collective experience is a wonderful resource, but it's vastly underused by most school districts, says Zeichner. Action research is not just about teacher research, he says, it's also an approach to staff development and school improvement. The Madison Area Action Research Network works toward those goals by stimulating staff development at the grass roots level. MMSD staffer Jennifer McCreadie says 48 Madison area teachers, comprising five groups, are involved this year.

The network makes action research more visible and gives participants more opportunity to exchange ideas and benefit from one another's experience. The network includes teachers, researchers, administrators, principals, and student teachers, representing a variety of professional viewpoints. Youngerman says having this variety is important in bridging the two worlds of research and practice and helping teachers begin to change what they do in the classroom every day.

Joining the network gives teachers a sense of empowerment, Zeichner says. "It means a lot to the teachers to have their voices heard. If their voices are heard at the conference, they may also be heard at school curriculum meetings and school board meetings."

Responding to teachers' requests to have a greater voice in the UW-Madison's teacher education program, Zeichner plans for a series of forums on campus that will involve teacher education faculty, prospective teachers, and classroom teachers. The forums will cover a variety of issues, including classroom management and teaching cross-culturally. They will bring teachers' ideas more into the discourse of the teacher education program, Zeichner says.

Students at the University of Wisconsin-Madison may now take a course in action research for credit. The course puts more students in touch with teachers doing action research, because network teachers serve as resources in the course. "It's a wonderful process of intellectual ferment," Zeichner says. "Because of the interest expressed by the classroom teachers, it's much more likely now that we can place teacher education students in classrooms with teachers who are examining their practice. That's exactly what we want to do."

For more information about the next action research conference or about the network, write to Zeichner at WCER, 1025 W. Johnson St., Madison, WI 53706.
School Choice: More Mixed Results

Can school choice programs remedy the ills of public education? Some of them, yes, but school choice is no panacea. WCER researcher and UW-Madison political science professor John Witte draws this conclusion after three years of studying Milwaukee’s experimental Parental Choice Program. Parents of Milwaukee students are much happier with their children’s private “choice” schools than they were with local public schools, Witte says, but student outcomes remain mixed.

The Wisconsin Department of Public Instruction appointed Witte in 1990 to evaluate the Milwaukee program, the first of its kind in the country. His research was funded by a startup grant from the UW-Madison’s Robert La Follette Institute of Public Affairs; the Spencer Foundation provides continuing funding.

Parents say they like the teachers, principals, instruction, and discipline in the choice schools. Eighty-four percent of parents say they are satisfied or very satisfied with the amount of information they received about the program. Eighty-six percent say they are satisfied or very satisfied with the cooperation they received from the schools they applied to. In short, parents want the program to continue.

Student outcomes vary

Despite parents’ happiness, the choice program study reveals mixed student outcomes. "Achievement change scores have varied considerably in the first three years of the program," Witte says. "Choice students’ reading scores increased the first year but fell in the second and third years. In math, choice students were essentially the same in the first two years, but recorded a significant increase in the third year." The fluctuation in achievement test results for choice students was due partly to attrition from the program.

Parental expectations

Parents enroll their children in the choice program because they’re dissatisfied with public schools. The reasons they cite most often for choosing a private school are school quality and the disciplinary environment they associate with private schools. To qualify, students must come from households with income of 1.75 times the poverty line or less. About 60% of choice parents receive AFDC or public assistance. Their children must not have attended private school or attended school districts other than the MPS District in the prior year.

Children who enter the choice program are very near the bottom in terms of academic achievement. Choice student academic achievement ranges from the 26th percentile to the 33rd percentile, compared with average national student achievement.

But they have something going for them. Witte finds that, compared with families with children in the public schools, choice families are generally smaller. This provides an opportunity for parents to focus more on any single child. In addition, the parents, especially mothers, are more educated, appear to have somewhat higher educational expectations for their children, and are more likely to work on homework with their children.

Providing alternatives

The Milwaukee Parental Choice Program is not an example of public subsidy of elite or exclusive private education, Witte says. Participating schools are private, nonsectarian schools, and they cannot discriminate in selection of students based on race, religion, gender, prior achievement, or prior behavioral records. The choice program provides alternative educational opportunities for families that cannot easily exercise choice by moving to a different district or by paying for private education, Witte says.

Instead of tuition, the private schools receive the MPS state aid (approximately $2,987 per pupil in 1993-94) for each student participating. Student enrollment increased from 341 in 1990 to 742 in 1993. (Seven schools participated in the choice program in 1990-91, and 12 in 1993-94.) In each year, the number of applicants greatly exceeded the available positions. The total number of students in the choice program in any year is limited to 1% of the membership in the Milwaukee Public Schools (968 in 1993-94).

A paradox

The program shows that private school choice can be targeted toward poor families attempting to find an alternative to what they view as a poor public school educational environment for their children. "The program was specifically designed to provide an opportunity for poor parents to send their children to alternative schools they could not otherwise afford," Witte says, "and two years of very consistent data indicate that in this, it succeeds."

For more information, contact Witte at WCER, 1025 W. Johnson St., Madison, WI 53706.
What They Say Really Matters

Point: Ability grouping is good. Students learn best when they're grouped with others who learn at the same pace.

Counterpoint: Ability grouping is unfair. It denies low-achieving students the kinds of challenges that would provide optimal learning experiences.

Adam Gamoran, a WCER researcher and professor of Educational Policy Studies and Sociology, takes neither side of the argument. He maintains that, in itself, ability grouping neither hurts nor helps; what really matters is the experiences students have after they've been assigned to their classes.

Gamoran's research, conducted with Martin Nystrand of the UW-Madison English Department, is important because few studies have investigated both the quality of instruction in different ability groups and achievement differences for the same set of classes.

Some studies have found examples of low-track classes that de-emphasized academic concerns, where teachers communicate low expectations, where instruction is fragmented, and where classroom events are punctuated by frequent interruptions. Gamoran says that in some cases, however, tracking can benefit low-achieving students. The key to that success, he says, lies in how tracking is handled.

"Some teachers using ability grouping are doing outstanding work with low-achieving students," Gamoran says. "They've transformed their classrooms into places of thoughtful dialogue and support, rather than places of coercion and regulation." Analyzing grouping, instruction, and achievement in eighth- and ninth-grade English classes in 25 Midwestern schools, Gamoran and Nystrand found that students in most high-track literature classes read more long works of fiction. Low track classes, meanwhile, filled in blanks more often than they wrote sustained essays. "On the whole," Gamoran says, "our study conformed to the general picture of less serious, less demanding, and less stimulating instruction in low-track classes."

But teachers in two Catholic schools broke this mold. They held high expectations for their low-track students. They refused to water down the curriculum by assigning readings in "juvenile fiction." They courses, regardless of track. But even the noncollege-track courses are more academically demanding in Catholic schools than in public schools. Teachers use the same set of readings with both high- and low-track classes, and prefer oral work over written assignments, in all sections. It is through discussion that the teacher shows concern for her students' views, giving their opinions a fair hearing, and showing them by example how to draw inferences from the reading assignment.

Mrs. Grant, who teaches both high- and low-track classes, presents a more structured lesson in her low-track class and monitors the students more carefully to keep them on task. She also uses the blackboard more, writing down what she and the students say, and rephrases their ideas at times. Compared with her high-track class, Mrs. Grant spends less time in small groups and more time in whole class instruction. She presents more examples and tries to draw on students' personal experiences more often.

In a classroom discussion of the novel To Kill A Mockingbird, Mrs. Grant gives students' opinions a hearing, and then expresses her own view. Following statements by students that border on racist generalizations, Mrs Grant asks them to really think about what they are saying. One student says that racism works both ways and gives an account of a recent incident during a bus ride. Mrs. Grant then relates the student's observations to the novel.

"Low-track classes often involve more structure, more emphasis on order, and more effort on the teacher's part," Gamoran concludes. "But they can still exhibit serious academic purpose and high expectations."

For more information, write to Gamoran at WCER, 1025 W. Johnson St., Madison, WI 53706.
Making Small Groups Work

While Adam Gamoran studies classes grouped according to ability, Elizabeth Cohen looks at effective ways to teach heterogeneous classes. Gamoran finds that the success of ability grouping depends on the quality of interaction between teacher and students, and Cohen finds that the success of heterogeneous small-group learning depends on how effectively students interact among themselves. The main challenge for the teacher is to stimulate the type of interaction desired without hovering over the groups and telling them what to do.

Cooperative learning is a process where students work together in groups small enough so that everyone can participate on a collective task, Cohen explains. The groups are expected to carry out their task without direct and immediate teacher supervision.

How students work together depends on the objective for assigning groupwork and on the kind of interaction the teacher wants to hear. Some teachers use groupwork for routine tasks such as solving problems where there is a clear right answer or a standard set of procedures. Other teachers use groupwork for conceptual learning or learning for understanding. Tasks might include taking multiple perspectives on a problem, learning to communicate abstract ideas orally and in writing, creating a dramatic or artistic representation of a set of ideas, developing a hypothesis, or creating a solution to a problem that has no one right answer.

The kind of group interaction useful for more routine types of academic learning differs from the kind of interaction desired when the objective is learning for understanding or conceptual learning. For conceptual learning, students’ interaction should be more of a mutual exchange process in which they share ideas, hypotheses, strategies, and speculations. For more routine kinds of learning, Cohen says, students may help each other to understand what the teacher or the textbook is saying and they may offer each other substantive and procedural information.

Once the teacher has decided on objectives and the kind of interaction that is desired, the stage is already set for the way students will work together. In the case of more routine tasks, collaborative seatwork is a common pattern: Students are given an assignment that they might ordinarily do as individual seatwork, but are told to work together and help each other. This design will work only if students are truly motivated to assist each other and are able to give high-quality explanations. Failure to meet these conditions will leave poor achievers without the help they need to complete the task.

In the case of less routine, more conceptual objectives, the pattern of working together should be based on equal exchange rather than one person explaining to others in the group how to do the task. To create equal exchange the teacher needs to find a true group task where no one person could easily do the task alone. Members will find it necessary to exchange ideas freely in order to achieve the goals set by the teacher. The problem given to the group for this kind of objective is typically rather uncertain, requiring the group to create a solution.

To maintain an equal exchange, the teacher must encourage as much talk among the members of the group as possible. Research has shown that when there is a group task and a problem with an uncertain solution, the success of the group depends on the amount of talking and working together. In a review of research on what makes small groups productive, Cohen concluded that improvement in measures of learning depends on matching the pattern of working together with the desired learning outcome.

Effective intervention

But the benefits of cooperative learning can be reaped only under carefully managed conditions, Cohen says. Without specific treatments of status problems, students perceived by the group to have less academic ability or those who are less popular tend to withdraw. They interact less often and are less influential, while the more popular and more academically successful students may dominate the group. This is what Cohen calls a status problem.

Teachers who are successful in dealing with these problems show students that many different abilities are relevant to the group task—reasoning creativity and spatial problem-solving, for example. Their students come to believe that each member of the group will be good at one or more of these abilities and that no one will be good at all of these abilities. The resulting interaction is more democratic. The quiet students and those perceived as "low status" begin to participate.

For more information about cooperative learning, see Cohen’s 1992 article "Restructuring the classroom: Conditions for productive small groups," available for $8.25 prepaid, from WCER document service, Room 242, 1025 W. Johnson St., Madison, WI 53706. In a revised edition of her book, Designing Groupwork: Strategies for Heterogeneous Classrooms (Teachers College Press, 1994), Cohen has translated this review of research for the practitioner. ☞
Time to Raise the Stakes

Although gambling isn’t permitted in schools, the quality of education for millions of kids depends on a dice roll.

Their formative years will be spent in excellent, mediocre, or poor schools, depending on the district and neighborhood in which they happen to grow up. Who holds the dice? The people in each state who formulate school funding policy.

It’s commonly believed that inequities in quality across school districts would be leveled if each district received the same amount of money. But two WCER researchers beg to disagree.

In the next three pages, we hear from William Clune and Allan Odden, both of whom are convinced that equity in education cannot result from providing “equal” resources. Odden addresses equitable funding for school districts, while Clune considers equity at the school level.

Giving all schools equal resources may seem on the surface to offer an equitable solution to everyone’s needs, Clune says, but it shortchanges children in high-poverty schools. So how can equity in school finance be achieved? Clune suggests that, rather than focusing on “inputs,” policymakers concentrate on student outcomes.

A different gestalt

From the “inputs” perspective, equal funding seems fair; it supposedly provides all students with “equality of opportunity.” A professor at the University of Wisconsin’s La Follette Institute of Public Affairs and project director for the Consortium for Policy Research in Education, Clune says some people are satisfied with equal inputs such as resources, curricula, teacher certification standards, and class size. But from an “outcomes” perspective, the “equal inputs” approach cheats students who need extra resources such as special education, bilingual education, and programs for children from poor families.

Even given “equal” resources, schools with a high percentage of poor kids have catastrophically low outcomes, Clune says. The percentage of children in high-poverty schools passing state exams at minimum levels in New York City, for example, is about half that for the rest of the state, but the schools get about the same amount of funding as the average school in the state. Adopting an “equality of outcomes” approach, Clune would rather determine the outcomes desired for students with special needs, find out what’s needed to reach those outcomes, and provide those resources.

“A large number of our kids are not reaching minimum outcome levels,” Clune says. “They’re getting nothing out of school, and they’re going to prisons.” He notes that even into the third and fourth decades of school desegregation, children from poor families and minority groups still are being excluded from the mainstream. Their education suffers because of a roll of the dice—the demographics of the neighborhoods in which they happen to live. “Equal funding represents a deliberate policy by the state not to give extra resources to those students most in need.”

Clune calls his position a revisiting of the “common schools” idea.

“Finance ought to be responsive to schools with low outcomes,” he says. “We also need to change policy to make our resources more effective.” Increased funding does not always lead to desired outcomes, because schools often don’t invest in the kind of resources that would raise outcomes. They tend to add what they like, such as higher salaries and smaller classes, without finding out which resources improve outcomes the most. For example, they might reduce class size without changing the teacher’s instructional approach.

Raising outcomes

Successful schools and teachers, on the other hand, pay attention to what the kids already know, and then direct their resources to raise outcomes. Teachers have specific instructional strategies. For example, when the kids fall behind, they might receive intensive tutoring until they are brought back up to class average. Clune points as an example to the Success for All program, which provides resources to children who most need them. Initiated in 1986 by researchers at Johns Hopkins University and the Baltimore City Public Schools, it increases reading achievement among disadvantaged students.

“Some schools are succeeding with disadvantaged kids,” Clune says. “We need to look at how they’re doing it, look at their instruction, their productivity, how they efficiently manage outcomes and manage time. The key is better management of time.” Clune advocates “true adequacy,” which means providing substantially more resources and trying to make every school a high performance school. “We need to merge finance, policy, and practice. If you’re serious about raising outcomes, you have to know everything you possibly can about good education.”

For more information, write to Clune at the Consortium for Policy Research in Education, WCER, 1025 W. Johnson St., Madison, WI 53706.
Special Resources for Special Needs

Despite increased funding for education over the past three decades, test scores show that students are achieving at about the same level they were twenty years ago. Parents want schools to do a better job of teaching, and they could.

If they just had more money to work with. Everybody knows that. It ain’t necessarily so, according to WCER researcher Allan Odden.

Just providing more money to schools won’t fix things, he says. The answer involves setting clear student achievement goals, restructuring the curriculum, reducing bureaucracies, moving more control to the local schools, and holding faculty accountable for results.

Odden is professor of Educational Administration at the University of Wisconsin-Madison. He codirects the Finance Center of the Consortium for Policy Research in Education (CPRE). Among other things, Odden helps states redesign their school finance systems from the ground up (see below).

When states such as Missouri decide it’s time to update their school finance formulas, demands for “equal per-pupil funding” are frequently raised. Odden points out, however, that simple “equal funding” inadvertently discriminates against some districts, particularly urban ones. Children from poverty backgrounds can achieve to high standards, he explains, but they need more instruction—sometimes even one-to-one tutoring, to learn at those levels. Thus, urban schools need more money for each low income child in order to provide that extra teaching. Further, prices are higher in urban districts, so dollars don’t go as far. So states revising their funding allocations should modify them to account for regional discrepancies.

Odden’s ideal school financing structure includes a high base per-pupil amount for each student, an add-on of approximately $2,000 per pupil for each student from low-income families, and a regional price adjustment on the total amount.

A hot issue

Odden monitors courtroom battles being waged across the country as school finance systems are being declared illegal in state after state. Parents and concerned citizens file suit to remedy inequities in funding. Why is it fair, they ask, that kids living in districts with high tax bases receive a better quality education than kids living in districts with lower tax bases? As parents demand equity and higher outcomes for their children, districts clamor for better resources. Not surprisingly, school finance reform has become a hot issue.

States are revising their formulas in the face of slower growth in state revenues. New federal resources, Odden points out, are less likely to be available, as health care takes precedence in the national agenda. So more state and federal money for public schools is a hard sell.

Property taxes have been the fastest rising revenue source in the country since 1985, Odden says, and schools have benefitted from the increase. But that trend is slowing as anti-tax sentiment grows. While living in California, Odden watched Proposition 13 cripple education revenues, and he saw California voters turn down initiatives that would

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A Missouri case study

In 1992 the Missouri legislature initiated statewide school reform that involved revising the finance formula, raising performance standards, developing new assessments, and giving more management authority to individual schools.

Annette Morgan, who represents the 39th legislative district, Kansas City, chairs the legislature’s elementary and secondary education committee. Her committee enlisted Allan Odden in 1993 to help craft the state’s new school finance formula by a March 1 deadline set by newly installed Governor Mel Carnahan.

Morgan explains, “The funding formula guides us as we distribute money to our elementary and secondary schools. But no matter how carefully they’re crafted, formulas eventually slip into disrepair and fail to promote equity.” Odden helped the committee by providing information and analysis. He reviewed the state education department’s budget, provided the committee with reports of refinancing projects other states had completed, and did his share of lobbying.

Working with Odden’s information, the committee shaped a new formula and drafted a bill, which became law in August 1993.

As important, a companion bill enacted Missouri’s approach to systemic education reform. It calls for student achievement goals, new curriculum frameworks, and a performance-based testing system. It also set aside 2% of the funds for the school finance formula for ongoing professional development. Odden says the hope is that new money will be spent in ways to implement the reform bill’s goals and bolster student achievement.
modify Proposition 13 and make it easier to raise more local property taxes.

Michigan's legislature enacted a law in July 1993 that eliminated the local property tax as a school revenue, at least temporarily cutting $63 billion from Michigan's total $10 billion public school budget. Replacement revenues are unlikely to equal those lost property tax dollars.

**Wanted: more productivity**

If reduced revenues weren't enough of a challenge, school systems face increased pressure to reform inequitable finance formulas. Pressure comes from many quarters—state legislatures, courts, businesses, and the public. Odden points out that state supreme courts in Montana, Kentucky, New Jersey, Tennessee, and Texas have overturned their school finance structures, as have lower courts in Alabama, Massachusetts, Minnesota, and Missouri. These states have been required to reduce or eliminate fiscal disparities caused by unequal distribution of revenue from the local property tax.

Most people don't spend a lot of time thinking about these policy issues, however; they just want students to achieve at higher levels. To improve student outcomes, Odden says, educators need to identify strategies that will advance all students to the levels of thinking and problem solving required for full participation in the work force and society of the next century.

Odden predicts that student outcomes will improve as the power to run schools is transferred from the district to the individual school. The most effective strategy for improving performance in organizations such as schools, he says, is to involve teachers in redesigning teaching and learning systems, in restructuring the curriculum, and in changing how resources are used to produce more results.

"School-based management is the way to go," he says. "I'd like to see us target education policy, including finance policy, more directly on schools, rather than districts. A school focus fits with teacher empowerment, with site-based management, and also with public school choice, charter schools, America 2000 schools, and several other school-based policy initiatives."

Under Odden's plan, schools would take over budgeting for curriculum and instruction, while the districts would retain some budgetary power in things such as transportation and capital facilities. Schools would also have the power to recruit, select, and develop personnel.

A shift to paying teachers for knowledge and skills, rather than just education units and experience, is also part of the plan. The critical ingredient, though, is ambitious student achievement goals and a good assessment system to track progress over time.

For more information, write to Odden at the Consortium for Policy Research in Education, WCER, 1025 W. Johnson St., Madison, WI 53706.