

Fostering Teacher-Conducted Research

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ABSTRACT. Recognizing the many benefits of teacher-conducted research, policymakers are beginning to promote classroom research as a way to encourage innovation and achieve significant school improvement goals. To foster teacher-conducted research, they are endorsing staff development in formal research procedures and providing access to the technology and resources necessary to conduct classroom research. Many schools are also providing teacher researchers the opportunity to collaborate with other educators and researchers through such innovative approaches as release time for collaborations with colleagues and research partnerships with universities. Supported by such policies, the teacher-as-researcher movement is gaining momentum, and teacher researchers are playing a key role in linking research and practice to school improvement.

The teacher-as-researcher movement is based on teachers liberating themselves from ideas imposed solely by others outside the classroom. In a sense, it constitutes an acknowledgment that teaching belongs to teachers and that as the experts about their own practice, teachers are the ones most able to understand and refine their work (Oberg & McCutcheon, 1990, p. 142-143).

Many teachers view traditional educational research as irrelevant to their experience; it is something done at universities and not connected to their daily lives. However, most teachers routinely conduct research in their classrooms whenever they synthesize information for a lecture, compare the results of instructional techniques, or evaluate the effectiveness of a lesson. Indeed, Allen, Combs, Hendricks, Nash, & Wilson (1988) argue that good teaching is action research, or "deliberate, personally owned and conducted, solution-oriented

investigation" (p. 380). Schön (1983) observes that, far from being a rare event, for many practitioners reflection-in-action is "the core of practice" (p. 69).

With the acceptance of reflection-in-action as a legitimate form of research converging with efforts to professionalize teaching, the teacher-as-researcher movement is gaining momentum. Teacher-conducted research is becoming more systematic, and teacher researchers are playing a key role in linking research and practice to school improvement. Consequently, policymakers are beginning to promote research and reflection at the classroom level as a way to encourage innovation and achieve significant school improvement goals such as improved teaching practices and more effective learning environments (Allen, et al., 1988; Kelsay, 1990; Kochan, 1990).

Benefits of Teacher-Conducted Research

Specifically, teacher-conducted research yields the following benefits:

- Conducting research in their classrooms encourages teachers to reflect on how student learning can be improved. By theorizing and testing assumptions about teaching strategies and student performance, teacher researchers heighten their awareness of teaching and learning. They are more willing to take risks, try new approaches, and assume important new roles as observers, listeners, and change agents.
- The scope of teachers' professional endeavors is broadened. By increasing their use of resources, collaborating with colleagues, and forming networks with other educators and researchers, teacher researchers are more active professionally.
- Teacher researchers are more competent decision makers. By becoming more frequent and more critical users of research, teacher researchers are more confident in their choice of curricula, methods, and assessment.
- The role of teacher researcher closely connects teaching to leadership. By drawing directly on classroom expertise informed by both experience and formal study, teacher researchers are more capable leaders in school improvement efforts as well as more insightful contributors to the body of education research.
- Teacher-conducted research provides a direct link between experience and theory. By studying teachers and learners in context and reflecting on new ideas, teacher researchers are able to make astute judgments about teaching and learning.

- Teacher researchers translate research into practice. By applying research-endorsed instructional techniques, teacher researchers create rich learning environments for students and bring such student-centered approaches as collaborative learning and creative problem solving to the classroom.
- Finally, teacher researchers are learners and, as such, role models in establishing a learning community. By continually learning, teacher researchers experience the renewal and growth associated with genuine professional development.

Staff Development

To change teachers' perspectives about the benefits of conducting and using research in their classrooms, staff development should emphasize the connection between current research and practice and the benefits to both teachers and students. Staff development in teacher-conducted research should also help teachers formalize the procedures they already use and provide them with the knowledge to systematically design, conduct, and analyze research (Wilkes, 1992).

Encouraging Teachers to Adopt a Broader View of Research

Although they apply the same skills and methods and produce the same kinds of results as scientists and other researchers, few teachers consider themselves educational researchers. A primary goal of teacher-researcher staff development, then, should be to broaden perceptions of what constitutes research, who can conduct research, and how research can be carried out.

Providing Teachers with a Range of Research Skills

Staff development should cover qualitative as well as quantitative techniques, focusing on case studies and other approaches that can readily be applied in school settings. A number of universities now offer courses in teacher-conducted research designed especially for practicing teachers. Typically, these courses introduce teachers to the elements of scientific inquiry and to a variety of research methodologies suitable for classroom use.

An example of a comprehensive staff development program in teacher-conducted research is the Teacher as Researcher-Linker (TRL) Program, developed by the American Federation of Teachers (AFT). Co-sponsored in Lake County, Florida, by the local school board and the Lake County Education Association, an affiliate of the AFT, the TRL program provides teachers with training in research-endorsed teaching and classroom management techniques in such areas as

cooperative small groups, teacher praise, and time on task. The teacher researchers implement the techniques in their classrooms and return to subsequent TRL programs to share the results of their classroom research. They also learn how to disseminate their findings to other teachers. As a result of the opportunity to reflect on teaching practices and to collaborate on problem solving with other teachers, participants credit the program with enhancing professional confidence, reducing burnout and discipline problems, and increasing time-on-task behaviors (Florida Department of Education [FDOE], 1988a).

Assisting Teacher Researchers in Disseminating Research Findings

Because teachers are accustomed to working in isolation, teacher-researcher staff development also includes techniques for sharing research findings with colleagues and documenting and publishing findings for the larger research community.

Including Instruction on Grant Writing

While a good deal of teacher-conducted research can be accomplished with existing resources, additional funding is often necessary for more complex studies or for release time, technology, and other kinds of research support. Therefore, an important component of teacher-researcher staff development could be instruction in grant writing. This training should cover identifying sources of funding for school-based research as well as preparing compelling proposals.

Access to Resources

To be effective researchers, teachers must have the knowledge and tools to conduct school-based research. To ensure that their faculties have adequate resources, many school systems furnish teachers with professional journals, research publications, and other relevant information as well as computer software for compiling and analyzing data.

Schools should also ensure that teacher researchers have access to the many information services and other technologies that are now available. A variety of computer networks, many of which are available to schools at no or minimal cost, provide information on school improvement initiatives, effective instructional programs, and other information of interest to teacher researchers.

For example, Florida educators can subscribe free of charge to the Department of Education's Florida Information Resource Network (FIRN), which offers, among other features, instructional resources and opportunities to

communicate with other educators via an electronic message system. Research assistance, including ERIC searches, is also available from the Department's School Improvement Resource Center. SERVELINE, which is available to educators in the southeast through the SouthEastern Regional Vision for Education (SERVE), provides teacher researchers access to on-line databases, a calendar of conferences and teleconferences, up-to-date information on educational issues and exemplary programs, and electronic mail. Subscription information is provided in the Appendix.

The National Education Association's (NEA) school improvement initiative, Mastery in Learning II (MIL II), does a good job of providing resources to teacher researchers. To help faculties use and conduct research in their schools, NEA assigns each site of participating schools a liaison from NEA headquarters, furnishes computer links with other schools and universities across the country, and sponsors regular sessions at which school representatives meet to share ideas and update their progress. To ensure that schools have the local support they need, district representatives sign contracts guaranteeing the backing of the entire school community. Armed with the resources to study school improvement issues, MIL II schools have succeeded in instituting such reforms as integrated curricula, innovative dropout-prevention programs, flexible scheduling, and collaborative learning. The result has been more motivated students and more energized teachers and principals (Diegmueller, 1991).

Opportunities to Collaborate

The most successful teacher researchers rely heavily on support from others. Whether it involves bouncing ideas off colleagues, exchanging information with other researchers, or seeking advice from specialists, this support is essential to planning and sustaining successful research efforts. Accordingly, one of the most valuable contributions that school systems can make to foster school-based research is enabling teacher researchers to collaborate with others within and outside the school (Wilkes, 1992).

Providing Access to Experts

When conducting formal studies, teacher researchers often need to call on content specialists, scientists, and other experts to help them plan their investigations and analyze the results. In addition to making appropriate district and state resource people available, school systems should ensure that teacher researchers have the opportunity to confer with subject area experts, researchers, statisticians, and university faculty as well as representatives of professional organizations, business, and the community who can support school-based research.

Initiating University-School Collaborations

In university-school collaborations, university researchers and graduate students link theory and practice by forming partnerships with classroom teachers in conducting school-based research. Through these collaborations, teachers receive "on-the-job" training in educational research by participating as either researchers or subjects in the studies.

In a collaboration between Florida State University and its laboratory school, Florida High School, students from the Department of Educational Research are assigned as research associates to classroom teachers. Through this program, the teacher-student research teams apply such research approaches as surveys and correlational studies to investigate classroom phenomena ranging from student discipline to the interpretation of poetry.

Enabling Teacher Researchers to Collaborate with Colleagues

Teachers need access to administrators and other teachers to make research plans, exchange resources, conduct observations, and share findings. Recognizing the value of collegial collaborations in promoting school improvement, many schools are devising innovative ways to enable teacher researchers to work together.

Flexible Scheduling. To foster collaboration among teachers, many principals schedule teaching assignments so that teachers from the same disciplines have common planning time. In other schools, class schedules are arranged to promote collaboration among interdisciplinary team members.

Release Time. To encourage innovation, many programs assign teacher researchers additional planning time or arrange for administrators or substitute teachers to cover their classes to give teachers release time to collaborate with other teachers. For example, NEA's Mastery in Learning project provides a bank of substitute days to enable teachers to work together on improving instruction, and teachers participating in the AFT Teacher as Researcher-Linker program in Lake County are given release time to attend day-long workshops.

Retreats. With the introduction of shared decision making, teacher retreats are gaining popularity as a way to promote collaboration among teachers. Whether they involve teachers from the same department or teachers from across the nation, retreats are ideal for enabling teacher researchers to reflect on teaching.

Collaboratives for Humanities and Arts Teaching (CHART), sponsored by the Rockefeller Foundation, hosts a number of retreats to promote teachers as the agents of educational reform. Lasting from several days to several weeks, these retreats have enabled teachers to collaborate on interdisciplinary instruction and have put teachers in contact with representatives of the business community, higher education, and cultural institutions (Lewis, 1989).

Sabbaticals. Sabbaticals, which have long been offered to higher education and private school faculties to promote independent study and reflection, are now available to many public school teachers. By giving them time away from the classroom to reflect on teaching, sabbaticals offer teachers excellent opportunities for professional growth and renewal.

A joint project between Dade County Public Schools and the United Teachers of Dade, the Academy for the Teaching Arts (DATA) was established in Dade County, Florida, in 1987 to stimulate professional growth among experienced teachers. A program of seminars and clinics operated exclusively by teachers, DATA provides its participants with the opportunity for interaction with other professionals, exposure to the latest educational research, and expanded professional horizons. "Resident" teachers, experts in their respective disciplines, are assigned to DATA from various public schools in the county to serve as facilitators and support persons. Each nine-week grading period, these resident teachers work with 12 colleagues, known as "externs," on a full-time basis. Together they conduct research projects, develop teaching plans, and share teaching strategies. During this time, "adjunct" teachers, all DATA graduates, replace the externs at their school sites. By giving teachers the opportunity to learn new ideas, DATA provides good teachers the opportunity to grow intellectually and "recharge their batteries" (FDOE, 1988b).

The North Carolina Center for the Advancement of Teaching, established in 1985, offers residential seminars throughout the year to provide North Carolina public school teachers opportunities to reflect on teaching. Designed as renewal experiences, the seminars emphasize intellectual and experiential activities rather than pedagogy. They feature such subjects as the environment, wildflower photography, or the music of Mozart, and provide free time for reflection and relaxation. To promote interaction among teachers and presenters, seminar groups are limited to 22 participants, who study, dine, and participate in recreational activities together. A typical group is comprised of teachers from all disciplines, grade levels, and areas of the state. Seminar expenses, including tuition, meals, and accommodations, are underwritten by the state, which also pays transportation and substitute teacher costs. To date, approximately 4000 North Carolina teachers

representing all 138 of the state's school districts have attended a seminar at the Center.

Teacher-student collaborations combine the role of teacher as researcher with that of teacher as facilitator of learning. As partners in the learning process, teachers and students are seekers and sharers of knowledge. In these collaborations, students participate as co-researchers, as when they record, analyze, and report the steps they follow during a problem-solving exercise.

In the microchemistry program at Sandalwood High School in Jacksonville, Florida, teachers and students collaborate on laboratory investigations. Designed to develop research skills, lessons begin with student-generated questions about scientific phenomena. Teachers and students then conduct laboratory activities to test their hypotheses and stimulate further inquiry (SERVE, 1992).

Conclusion

As we focus on comprehensive school improvement in Florida, it is important to recognize that the key ingredient is an enthusiastic and energetic teacher corps. By being actively involved in developing and implementing strategies for improving their schools, teachers can experience a sense of efficacy that is essential to professional growth. By applying the strategies described here, we in Florida are moving rapidly forward in developing a reinvigorated teaching force, one that will play a significant part in directing the course of school improvement throughout the state and nation.

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