

# Applying Our Findings to Today's Innovations

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For a variety of reasons, many educators today regard a school improvement study such as ours as irrelevant. No one, it seems, is implementing "innovations." Yet, we would argue, several movements are afoot that cry out for informed guidance. Micro-computers, for instance, have captured the fancy and the purse strings of the education community. And hardly a school in the country has been untouched by the "effective schools" movement; districts, consortia, regional service agencies, and state departments are leaping on the bandwagon to encourage (or require) schools to implement findings from a variety of studies of effective schooling practices. Schools are searching for, developing, and implementing innovations—these among others.<sup>1</sup>

The NETWORK daily assists schools engaged in implementing innovations, and we eagerly use the findings from our study to make their efforts more successful. In this article we highlight the findings we have discovered to be most useful. There are, specifically, four ingredients that are critical to our scenario of successful change: (1) a well-defined, "classroom-friendly," effective innovation; (2) ample, appropriate, and continuous help for teachers from a variety of players; (3) clear direction from administrators; and (4) attention to institutionalization.

## A Well-Defined, "Classroom-Friendly," Effective Innovation

The "what" of any school improvement effort is vitally important. Innovations can be selected from one of the many pools of exemplary practices, such as the National Diffusion Network (NDN) or dissemination networks sponsored by state education agencies. They can be purchased from publishers or distributors of educational materials and pro-

grams. Or they can be developed in the school or district. While our study gave high marks to local development as well as to adoption of externally developed practices, it's important to consider that development costs an average of 20 times the cost of adoption.

Whatever the source of the innovation, it should be clearly defined so that everyone involved knows what it will look like, what its key components are, what should be happening when it is being used in the classroom, and how to know when implementation is achieved.

Besides being well-defined, an innovation needs to be "classroom-friendly," to contort some computer jargon. It needs to "fit" a real, live classroom setting; its introduction must employ strategies that help teachers incorporate it into the continuous job of teaching.

Finally, an innovation needs to be effective—it needs to carry some evidence that it has actually made a difference with students. Teachers have enough to do without implementing an unproven program. As Crandall points out in his article, they also will not get the all-important reward of seeing stu-

*Project Catch-Up*



*Students are enthusiastic when change is successful*

Successful change can occur anywhere if programs are effective and workable, teachers receive the help they need, administrators provide clear direction, and programs are ushered into the established curriculum.



dents grow, which leads to continued use and a strong sense of ownership.

Our own experiences with instructional technology illustrate this point. With the expanding presence of microcomputers in schools, it is easy to forget that microcomputers by themselves fit none of our criteria: well-defined, "classroom-friendly," or effective. It is not the hardware itself that is the innovation as much as it is the use of the hardware for a variety of instructional purposes. Since the applications of microcomputers range from simple drills to programming to word processing, the

innovation must be defined by its *particular* instructional application. A specific application that can be broken down into key components is much easier to describe, implement, and assess than an ambiguous, foggy spectre called "educational computing."

Recently we helped develop a microcomputer-based writing program called QUILL.<sup>2</sup> Designed to support effective writing instruction, QUILL has worked partly because its technological and instructional components (hardware and software, classroom applications, and management) have been integrated into a program that teachers can understand and use in a classroom of 30 students without totally disrupting their routines. To help them understand QUILL, we described it clearly through a Practice Profile<sup>3</sup> that defined QUILL's 15 components, including aspects of writing instruction, computer use, and classroom management.

QUILL is "classroom-friendly" since it is not only a set of materials (software), but an actual instructional tool that encourages and supports certain teaching behaviors and strategies. For example, through a teacher's guide and required training activities, teachers learn how the planning, storage, and text-editing systems in QUILL can help students in the three stages of the writing process: prewriting, composing, and revision. Finally, we have made certain that QUILL is effective through field-testing in a variety of classroom settings.

#### Ample, Appropriate Help From a Variety of Players

As Cox points out in her article, there are plenty of roles to play in helping

teachers use a new practice. In efforts that cut across schools, there is an especially important role for someone in the central office, whom we call the "local facilitator." Although we infrequently found building principals and even teachers functioning in this role, a district curriculum coordinator or staff developer is more apt to have the legitimacy, centrality (for communication purposes), time, skills, clout, and resources to perform it well. The local facilitator acts as *cheerleader*, building commitment early and maintaining it through constant encouragement; *linker*, bringing in outside expertise and ideas and linking resources and expertise within the district; and *trouble-shooter*, helping teachers solve problems and maximize their efforts after use has begun. Some local facilitators perform all these functions and more; others take responsibility for orchestrating the effort, making sure the full range of functions is performed. Whatever his or her strategy, this person is critical to success.

External facilitators—trainers, consultants, and resource providers—can actually "deliver" the innovation. As trainers, they should be highly credible, having had classroom experience with the innovation as well as a firm grasp of how to work with adult learners. They are to be emulated by participants in the training; they need to be firmly grounded in the realities of teachers and classrooms.

Often external facilitators work closely with local facilitators and building (and sometimes district) administrators to ensure that the support systems for initial and continued use of the new practice are in place. They conduct initial training tailored to the needs of teachers. From the study findings, we have learned one important way to differentiate assistance; it depends on how much of a change an innovation re-



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quires of potential users. For those facing only a minor change in their classroom practice—that is, those for whom the innovation is a refinement—little time and energy and few resources are required. A workshop that introduces them to the practice, trains them in components they don't already use, and revs up their enthusiasm for it is all that's necessary. Time to use the innovation and an occasional reminder of its importance tend to increase implementation success. Assistance resources can be saved for those facing a major change.

Teachers for whom an innovation requires major changes need long-term, intensive assistance. Initial training should provide practice in the actual behaviors to be used in the classroom. Further, activities should be sequenced to answer the questions or concerns the teachers are most likely to have.<sup>4</sup> These begin with personal concerns (Can I do it? How will it affect me?) and management considerations (How can I fit all I need to do into one short day? What materials and equipment do I need?). Teachers should have time to plan for use of the new approaches and behaviors, to actually schedule how they will fit in the daily classroom routine.

Such training is often the responsibility of the external facilitator. But it is only a first step. Then the local facilitator can provide "coaching," which involves practice in the classroom, giving help and direct, specific feedback. (This can also be done by a peer who has been trained and knows what to observe.) Regular follow-up, again orchestrated by the local facilitator, should include informal "comfort and caring" sessions after school, where teachers bring their successes and problems to share; and more formal training sessions, where additional strategies are offered and skills developed.

The principal may or may not take an active, helping role in implementation. Where he or she is particularly interested in the new practice, this may be appropriate. Also, where fidelity to the innovation's components is desired, careful monitoring and feedback from the building level is essential. Otherwise, acknowledging that the innovation is important, arranging so that school resources and schedules support its use, and communicating requests from teachers to the local facilitator, are functions that principals can play best.

Now, to illustrate these ideas with our efforts in educational technology. In planning for QUILL's implementation

with administrators, we are careful to specify our expectations and responsibilities as well as those of the school district. We require that a local facilitator be selected to take specific responsibility for providing continuous support. Local facilitators, most often district level language arts or computer coordinators, attend a training session prior to teacher training that familiarizes them with the program and defines their role. This not only makes our jobs as external facilitators easier, but it says to the teachers, "We in the district are committed to making QUILL work, and you have our full support."

Principals also receive attention from us. Although they do not need the full training required of teachers, we believe they must be familiar with both QUILL and their special role. We conduct a short, two-hour seminar for principals that gives them the opportunity for hands-on experience with the QUILL software and orients them to classroom use of QUILL through the Practice Profile. We also give them a list of ways they can help teachers and talk about the concerns and problems they are most likely to encounter as their teachers become QUILL users. The local facilitator works with us in this seminar, which ends with a discussion of how support responsibilities can be divided to best meet teachers' needs.

The training we do for QUILL is designed to be as responsive and flexible as possible while providing appropriate learning opportunities. Since using QUILL requires major change for many teachers, combining new skills in computer use and writing instruction, we designed an intensive three-day training workshop. Training is a balance between learning the ins and outs of the software and working through writing activities that demonstrate some of the instructional principles QUILL was designed to support. We discuss management issues and how QUILL can be applied to specific writing activities and projects mentioned by teachers. As they overcome their personal concerns and become familiar with the capabilities of the hardware and software, teachers start recognizing and exploring how QUILL can support and expand their current instructional practices.

Three days of training can leave teachers feeling prepared, yet still a bit overwhelmed. To make the transition from theory to practice, we team with the local facilitator to spend time in classrooms answering questions, making suggestions, and providing feedback,

support, and guidance. This helps make the crucial first step of implementing QUILL easier.

Once teachers are on their way, local facilitators convene sessions to assess progress, discuss problems, and exchange successes. These sessions need to be scheduled purposely, or they don't occur. Here the support system functions beyond training and into the implementation phase. Information from these sessions feeds into additional training sessions. As teachers become adept, opportunities to "show off" are planned. For example, we have found that arranging a demonstration session for teachers by teachers builds confidence and paves the way for expansion of the program into other classrooms. Teachers become local experts and can provide assistance and support to new users, act as effective advocates to other teachers and parents, and help ensure that the program becomes institutionalized.

#### Clear Direction From Administrators

As both Huberman and Miles stress in their articles, administrators in successful improvement sites take their leadership roles seriously and provide the direction needed to engage teachers in the new practices. The "administrator as thug" picture is *not* what we are advocating. Rather, what is needed is an administrator who says, "We're going to do this together, and we're going to get all the help we need." In some schools, we found that the decision to implement a new practice was made with teachers fully involved; in other schools, teachers were merely targets of the process. In either case, with clear and continuous direction and assistance from administrators, improvement efforts resulted in committed, skilled teachers who described many benefits of using the practice.

If the implementation effort is school-based, the administrator who must act is the principal; if district-based, it can be either a line administrator like an associate superintendent, or a curriculum coordinator or staff developer, but only if they have legitimate power.

What does administrator "direction" look like? First, it is a clear and public statement to teachers, other staff, and even parents, that the innovation is an important priority. But it is more than words. It is demonstrated when principals ease up on their requirements for teachers in other content areas; when teachers who are involved in the innovation are asked to make presentations to parent groups; and when resources



that could have gone elsewhere are spent on materials to support the innovation. Sometimes direction means requiring teachers to attend training they "didn't exactly volunteer for." (Our experience with this situation is that teachers still become advocates, grateful that someone "gave them a shove.")

Finally, direction from administrators means monitoring classroom use, either formally or informally, to be sure the innovation's key components are in place, and if not, why. Staying close to teachers, encouraging, reminding—all the time making certain teachers get the help they need—are all-important behaviors. Just as vital is the administrator's responsibility to discontinue using a new practice when other priorities get in the way. In the case of QUILL, with microcomputers so costly and the demand for using them in other content areas so high, one administrator decided

that the necessary hardware could be put to better use. Such a decision is often no harder than the decision to be involved and stay involved in a new practice. This is what "administrator direction" is all about.

#### Attention to Institutionalization

As Miles points out in his article, there are many details to be attended to if a new practice is to be incorporated into the life of a school or district. First, supports must be provided. These include:

- Providing continual administrative direction and support, as noted in the previous two sections
- Establishing routines for supply and maintenance
- Writing the innovation into curriculum guidelines or regulations
- Orienting new or reassigned teachers
- Spreading the innovation to all or most of the eligible users.

Second, threats must be eliminated. These include creating a line item in the budget to serve as some protection against budget cuts and sharing the expertise and responsibility among several people to avoid losing energy and momentum through loss of the key advocate. Careful attention to these supports and threats is a crucial role for administrators in an improvement effort.

In addition to the assistance and support activities, we have attempted to make QUILL a thriving, established resource in the schools. To avoid the trap of having only one or two district pioneers (or martyrs, depending on your perspective) venture into the world of technology, we ask that several teachers from a district become QUILL users, training at least two teachers per building. This provides a "critical mass" of users who can gain moral support and professional advice from each other, while also becoming local experts who can help pass on the skills to other teachers. This level of effort also demonstrates the commitment of the administration, provides opportunities for staff to grow, and eliminates the "star teacher" syndrome, where an improvement effort rises and falls on the shoulders of one or two dedicated teachers.

In our initial training of local facilitators, and again in our seminar for principals, we list and discuss briefly the "supports" for institutionalization. Once teachers have integrated QUILL into their routines, we actually start

working with local facilitators to build these in. This means discussing how local expertise might be used to train new or additional teachers; suggesting sources or additional funds for more equipment and materials, and strategies for procuring them; and encouraging new policies by high-level administrators and school boards that ensure support for QUILL. It also involves helping schools evaluate their use of QUILL (which, naturally, cannot wait until midway into the year). Nothing speaks louder in discussions of priorities than clear evidence of effectiveness.

In the rush to jump on the new bandwagons, particularly ones loaded with microcomputers, educators often forget the demands of institutionalization. No matter how much time and money are invested in training and materials, microcomputers are guaranteed to join T.V. sets and overhead projectors in classroom closets without attention to incorporating them into the life of the school.

Our image of success is likely to be controversial, partially because it challenges educators at all levels to be decisive, pro-active, and clear about what is important to them and to their schools. But in an environment of declining resources, decreasing public confidence, and increasing demands for schools to keep up with society's trends, we cannot afford to reject this scenario. Rather, as we tell teachers about new practices, "Try it first with its key elements intact. We think you'll find it works, and you'll join us in helping others use it." □

<sup>1</sup>Although microcomputers fit most people's view of an "innovation," we believe that implementing effective schools research fits that term as well. Since we define an innovation as any idea, product, or process that requires different behaviors, then increasing time-on-task or engaging in goal- and standard-setting practices congruent with effective schools can likewise be considered innovations.

<sup>2</sup>In collaboration with Bolt Beranek and Newman, Inc. of Cambridge, Massachusetts, we designed, field tested, and are now disseminating QUILL.

<sup>3</sup>See Susan F. Loucks and David P. Crandall, *The Practice Profile: An All-Purpose Tool for Program Communication, Staff Development, Evaluation, and Implementation* (Andover, Mass.: The NETWORK, Inc., 1981).

<sup>4</sup>See Gene E. Hall and Susan F. Loucks, "Teacher Concerns as a Basis for Facilitating and Personalizing Staff Development," *Teachers College Record* 80 (1978): 36-53.

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