1 What Is Action Research?

A succinct definition of action research appears in the workshop materials we use at the Institute for the Study of Inquiry in Education. That definition states that action research

is a disciplined process of inquiry conducted by and for those taking the action. The primary reason for engaging in action research is to assist the “actor” in improving and/or refining his or her actions.

Practitioners who engage in action research inevitably find it to be an empowering experience. Action research has this positive effect for many reasons. Obviously, the most important is that action research is always relevant to the participants. Relevance is guaranteed because the focus of each research project is determined by the researchers, who are also the primary consumers of the findings.

Perhaps even more important is the fact that action research helps educators be more effective at what they care most about—their teaching and the development of their students. Seeing students grow is probably the greatest joy educators can experience. When teachers have convincing evidence that their work has made a real difference in their students’ lives, the countless hours and endless efforts of teaching seem worthwhile.

The Action Research Process

Educational action research can be engaged in by a single teacher, by a group of colleagues who share an interest in a common problem, or by the entire faculty of a school. Whatever the scenario, action research always involves the same seven-step process. These seven steps, which become an endless cycle for the inquiring teacher, are the following:

1. Selecting a focus
2. Clarifying theories
3. Identifying research questions
4. Collecting data
5. Analyzing data
6. Reporting results
7. Taking informed action

Step 1—Selecting a Focus

The action research process begins with serious reflection directed toward identifying a topic or topics worthy of a busy teacher's time. Considering the incredible demands on today's classroom teachers, no activity is worth doing unless it promises to make the central part of a teacher's work more successful and satisfying. Thus, selecting a focus, the first step in the process, is vitally important. Selecting a focus begins with the teacher researcher or the team of action researchers asking:

What element(s) of our practice or what aspect of student learning do we wish to investigate?

Step 2—Clarifying Theories

The second step involves identifying the values, beliefs, and theoretical perspectives the researchers hold relating to their focus. For example, if teachers are concerned about increasing responsible classroom behavior, it will be helpful for them to begin by clarifying which approach—using punishments and rewards, allowing students to experience the natural consequences of their behaviors, or some other strategy—they feel will work best in helping students acquire responsible classroom behavior habits.

Step 3—Identifying Research Questions

Once a focus area has been selected and the researcher's perspectives and beliefs about that focus have been clarified, the next step is to generate a set of personally meaningful research questions to guide the inquiry.

Step 4—Collecting Data

Professional educators always want their instructional decisions to be based on the best possible data. Action researchers can accomplish this by making sure that the data used to justify their actions are valid
What Is Action Research?

(meaning the information represents what the researchers say it does) and reliable (meaning the researchers are confident about the accuracy of their data). Lastly, before data are used to make teaching decisions, teachers must be confident that the lessons drawn from the data align with any unique characteristics of their classroom or school.

To ensure reasonable validity and reliability, action researchers should avoid relying on any single source of data. Most teacher researchers use a process called triangulation to enhance the validity and reliability of their findings. Basically, triangulation means using multiple independent sources of data to answer one’s questions. Triangulation is like studying an object located inside a box by viewing it through various windows cut into the sides of the box. Observing a phenomenon through multiple “windows” can help a single researcher compare and contrast what is being seen through a variety of lenses.

When planning instruction, teachers want the techniques they choose to be appropriate for the unique qualities of their students. All teachers have had the experience of implementing a “research-proven” strategy only to have it fail with their students. The desire of teachers to use approaches that “fit” their particular students is not dissimilar to a doctor’s concern that the specific medicine being prescribed be the correct one for the individual patient. The ability of the action research process to satisfy an educator’s need for “fit” may be its most powerful attribute. Because the data being collected come from the very students and teachers who are engaged with the treatment, the relevance of the findings is assured.

For the harried and overworked teacher, “data collection” can appear to be the most intimidating aspect of the entire seven-step action research process. The question I am repeatedly asked, “Where will I find the time and expertise to develop valid and reliable instruments for data collection?”, gives voice to a realistic fear regarding time management. Fortunately, classrooms and schools are, by their nature, data-rich environments. Each day a child is in class, he or she is producing or not producing work, is interacting productively with classmates or experiencing difficulties in social situations, and is completing assignments proficiently or poorly. Teachers not only see these events transpiring before their eyes, they generally record these events in their grade books. The key to managing triangulated data collection is, first, to be effective and efficient in collecting the material that is already swirling around the classroom, and, second, to identify other sources of data that might be effectively surfaced with tests, classroom discussions, or questionnaires.
Step 5—Analyzing Data

Although data analysis often brings to mind the use of complex statistical calculations, this is rarely the case for the action researcher. A number of relatively user-friendly procedures can help a practitioner identify the trends and patterns in action research data. During this portion of the seven-step process, teacher researchers will methodically sort, sift, rank, and examine their data to answer two generic questions:

- What is the story told by these data?
- Why did the story play itself out this way?

By answering these two questions, the teacher researcher can acquire a better understanding of the phenomenon under investigation and as a result can end up producing grounded theory regarding what might be done to improve the situation.

Step 6—Reporting Results

It is often said that teaching is a lonely endeavor. It is doubly sad that so many teachers are left alone in their classrooms to reinvent the wheel on a daily basis. The loneliness of teaching is unfortunate not only because of its inefficiency, but also because when dealing with complex problems the wisdom of several minds is inevitably better than one.

The sad history of teacher isolation may explain why the very act of reporting on their action research has proven so powerful for both the researchers and their colleagues. The reporting of action research most often occurs in informal settings that are far less intimidating than the venues where scholarly research has traditionally been shared. Faculty meetings, brown bag lunch seminars, and teacher conferences are among the most common venues for sharing action research with peers. However, each year more and more teacher researchers are writing up their work for publication or to help fulfill requirements in graduate programs. Regardless of which venue or technique educators select for reporting on research, the simple knowledge that they are making a contribution to a collective knowledge base regarding teaching and learning frequently proves to be among the most rewarding aspects of this work.

Step 7—Taking Informed Action

Taking informed action, or “action planning,” the last step in the action research process, is very familiar to most teachers. When teachers write lesson plans or develop academic programs, they are engaged in
the action planning process. What makes action planning particularly satisfying for the teacher researcher is that with each piece of data uncovered (about teaching or student learning) the educator will feel greater confidence in the wisdom of the next steps. Although all teaching can be classified as trial and error, action researchers find that the research process liberates them from continuously repeating their past mistakes. More important, with each refinement of practice, action researchers gain valid and reliable data on their developing virtuosity.

Three Purposes for Action Research

As stated earlier, action research can be engaged in by an individual teacher, a collaborative group of colleagues sharing a common concern, or an entire school faculty. These three different approaches to organizing for research serve three compatible, yet distinct, purposes:

- Building the reflective practitioner
- Making progress on schoolwide priorities
- Building professional cultures

Building the Reflective Practitioner

When individual teachers make a personal commitment to systematically collect data on their work, they are embarking on a process that will foster continuous growth and development. When each lesson is looked on as an empirical investigation into factors affecting teaching and learning and when reflections on the findings from each day’s work inform the next day’s instruction, teachers can’t help but develop greater mastery of the art and science of teaching. In this way, the individual teachers conducting action research are making continuous progress in developing their strengths as reflective practitioners.

Making Progress on Schoolwide Priorities

Increasingly, schools are focusing on strengthening themselves and their programs through the development of common focuses and a strong sense of esprit de corps. Peters and Waterman (1982) in their landmark book, In Search of Excellence, called the achievement of focus “sticking to the knitting.” When a faculty shares a commitment to achieving excellence with a specific focus—for example, the development of higher-order thinking, positive social behavior, or higher standardized test scores—then collaboratively studying their practice will
not only contribute to the achievement of the shared goal but would have a powerful impact on team building and program development. Focusing the combined time, energy, and creativity of a group of committed professionals on a single pedagogical issue will inevitably lead to program improvements, as well as to the school becoming a "center of excellence." As a result, when a faculty chooses to focus on one issue and all the teachers elect to enthusiastically participate in action research on that issue, significant progress on the schoolwide priorities cannot help but occur.

**Building Professional Cultures**

Often an entire faculty will share a commitment to student development, yet the group finds itself unable to adopt a single common focus for action research. This should not be viewed as indicative of a problem. Just as the medical practitioners working at a "quality" medical center will hold a shared vision of a healthy adult, it is common for all the faculty members at a school to share a similar perspective on what constitutes a well-educated student. However, like the doctors at the medical center, the teachers in a "quality" school may well differ on which specific aspects of the shared vision they are most motivated to pursue at any point in time.

Schools whose faculties cannot agree on a single research focus can still use action research as a tool to help transform themselves into a learning organization. They accomplish this in the same manner as do the physicians at the medical center. It is common practice in a quality medical center for physicians to engage in independent, even idiosyncratic, research agendas. However, it is also common for medical researchers to share the findings obtained from their research with colleagues (even those engaged in other specialties).

School faculties who wish to transform themselves into "communities of learners" often empower teams of colleagues who share a passion about one aspect of teaching and learning to conduct investigations into that area of interest and then share what they've learned with the rest of the school community. This strategy allows an entire faculty to develop and practice the discipline that Peter Senge (1990) labeled "team learning." In these schools, multiple action research inquiries occur simultaneously, and no one is held captive to another's priority, yet everyone knows that all the work ultimately will be shared and will consequently contribute to organizational learning.
Why Action Research Now?

If ever there were a time and a strategy that were right for each other, the time is now and the strategy is action research! This is true for a host of reasons, with none more important than the need to accomplish the following:

- Professionalize teaching.
- Enhance the motivation and efficacy of a weary faculty.
- Meet the needs of an increasingly diverse student body.
- Achieve success with “standards-based” reforms.

Professionalizing Teaching

Teaching in North America has evolved in a manner that makes it more like blue-collar work than a professional undertaking. Although blue-collar workers are expected to do their jobs with vigilance and vigor, it is also assumed that their tasks will be routine, straightforward, and, therefore, easily handled by an isolated worker with only the occasional support of a supervisor.

Professional work, on the other hand, is expected to be complex and nonroutine, and will generally require collaboration among practitioners to produce satisfactory results. With the exploding knowledge base on teaching and learning and the heightened demands on teachers to help all children achieve mastery of meaningful objectives, the inadequacy of the blue-collar model for teaching is becoming much clearer.

When the teachers in a school begin conducting action research, their workplace begins to take on more of the flavor of the workplaces of other professionals. The wisdom that informs practice starts coming from those doing the work, not from supervisors who oftentimes are less in touch with and less sensitive to the issues of teaching and learning than the teachers doing the work. Furthermore, when teachers begin engaging their colleagues in discussions of classroom issues, the multiple perspectives that emerge and thus frame the dialogue tend to produce wiser professional decisions.

Enhancing Teacher Motivation and Efficacy

The work of teaching has always been difficult. But now it isn’t just the demands of the classroom that are wearing teachers down. Students increasingly bring more problems into the classroom; parental and societal expectations keep increasing; and financial cutbacks make it clear
that today's teachers are being asked to do more with less. Worse still, the respect that society had traditionally placed upon public school teachers is eroding, as teacher bashing and attacks on the very value of a public education are becoming a regular part of the political landscape. Consequently, teacher burnout has become the plague of the modern schoolhouse.

Many teachers now ask, "Am I making any difference?" Regardless of all the negative pressures on teachers, the sheer nobility of the work keeps many dedicated educators on the job, but only so long as they can get credible answers to the "efficacy" question. However, without credible evidence that the work of teaching is making a difference, it is hard to imagine the best and brightest sticking with such a difficult and poorly compensated line of work. Fortunately, evidence has shown that teachers who elect to integrate the use of data into their work start exhibiting the compulsive behavior of fitness enthusiasts who regularly weigh themselves, check their heart rate, and graph data on their improving physical development. For both teachers and athletes, the continuous presence of compelling data that their hard work is paying off becomes, in itself, a vitally energizing force.

Meeting the Needs of a Diverse Student Body

In a homogeneous society in which all students come to school looking alike, it might be wise to seek the one right answer to questions of pedagogy. But, as anyone who has recently visited an American classroom can attest, it is rare to find any two children for whom the same intervention could ever be "right on target." The days are gone when it was possible to believe that all a teacher had to do was master and deliver the grade-level curriculum. It is now imperative that classroom teachers have strong content background in each of the subjects they teach, be familiar with the range of student differences in their classrooms, and be capable of diagnosing and prescribing appropriate instructional modifications based upon a knowledge of each child's uniqueness.

Crafting solutions to these dynamic and ever changing classroom issues can be an exciting undertaking, especially when one acknowledges that newer and better answers are evolving all the time. Nevertheless, great personal satisfaction comes from playing a role in creating successful solutions to continually changing puzzles. Conversely, if teachers are expected to robotically implement outdated approaches, especially when countless new challenges are arriving at their door, the frustration can become unbearable.
Achieving Success in a Standards-Based System

In most jurisdictions standards-driven accountability systems have become the norm. Although they differ somewhat from state to state and province to province, fundamentally these standards-based systems have certain things in common. Specifically, most education departments and ministries have declared that they expect the standards to be rigorous and meaningful, and that they expect all students to meet the standards at the mastery level.

The stakes in the standards movement are high. Students face consequences regarding promotion and graduation. Teachers and schools face ridicule and loss of funding if they fail to meet community expectations. Of course, none of that would be problematic if we as a society knew with certainty how to achieve universal student success. However, the reality is that no large system anywhere in the world has ever been successful in getting every student to master a set of meaningful objectives. If we accept the truth of that statement, then we need to acknowledge the fact that achieving the goal of universal student mastery will not be easy. That said, most people will agree it is a most noble endeavor in which to invest energy and a worthy goal for any faculty to pursue.

The reality is that our public schools will not prevail with the challenges inherent in the standards movement unless they encourage experimentation, inquiry, and dialogue by those pioneers (the teachers) who are working toward meeting those challenges. For this reason, it is imperative that these 21st century pioneers, our classroom teachers, conduct the research on “standards attainment” themselves.

So the time is right for action research. The teachers, schools, and school systems that seize this opportunity and begin investing in the power of inquiry will find that they are re-creating the professional practice of education in their locale as a meaningful and rewarding pursuit. Conversely, school systems that enter the 21st century unwilling to invest in the “wisdom of practice” will likely find it increasingly hard to fill their classrooms with enough teachers who are both capable of and willing to tackle the challenges that lie ahead.
Chapter 1 identified and defined the seven steps of the action research process. This chapter identifies some specific activities that teachers can engage in as they work their way through this process. To illustrate some possible activities, I will now walk through the seven steps and discuss how I might have addressed them when teaching writing to 9th grade students.

Step 1—Finding a Focus

The first step of the action research process calls for a significant investment of time and energy. Because of the time pressure experienced by classroom teachers, the annual ritual of choosing professional development goals and school improvement targets usually doesn’t receive the reflective time that it deserves. This becomes costly in at least two ways. Often teachers end up committing themselves to work on projects that, upon later consideration, weren’t really worth their time. And, on other occasions, although the educational outcomes teachers pursued might have been worthwhile, the interventions that were hurriedly adopted often turn out to be an inadequate match for the local situation. Both of these problems can be avoided if teachers are encouraged and supported in becoming more deliberate in their planning.

So how can busy teachers work through the “getting ready” process while at the same time attending to those other issues vying for their limited time? The following strategies have proved helpful for many teacher researchers who are searching for a meaningful focus.
Strategy 1—The Reflective Journal

A good way to find a focus is to use a reflective journal. This process begins by creating a prompt that will provide a focus for daily reflections for a limited number of days. For example, I might elect to spend 10 minutes a day for two weeks responding to the following prompt: What occurred today in my writing class that went well, poorly, or was a surprise to me? Why do I think these occurrences are significant?

After writing 10 daily responses to this prompt, I can stop, reread my work, and see which issues were repeated and what trends emerged, if any. For example, I might find myself repeatedly fretting over the lack of attention my students were giving to the editing process. Such journal entries could help me identify the following two concerns: (1) my students behave as though my expectations were for them to simply fill up a page with words; (2) my students appear willing to accept significant sloppiness with mechanics, word choice, and syntax in their final papers. Furthermore, my journal observations could help me see that my constant nagging about the importance of revision was going unheared, or at least unheeded, by a number of my students.

In this case, the use of the journal could have helped me understand that “learning how to be more effective in the encouragement of editing” was a focus that would benefit both me and my students.

Strategy 2—The Reflective Interview

The reflective interview is a focusing technique that is valuable when colleagues are interested in working as a group; however, an individual teacher can also use this process when developing a focus for a solo inquiry. Whether being used for a one-person project or for group work, the reflective interview requires the assistance of a colleague.

The reflective interview is a verbal process that produces insights similar to those produced through journaling. However, with the reflective interview, teachers talk through their concerns rather than write about them. The rules for the reflective interview are few and simple:

- Find a location where you are unlikely to be interrupted for at least 30 minutes.
- Select a colleague who is willing to listen as you talk.
- Pick a topic to talk about that meets the following criteria: (1) it concerns teaching or learning; (2) it is an issue of significant personal concern; (3) improving performance on this issue is within your control.
• Explain to your colleague that his or her job is to listen, ask clarifying questions if necessary, and stimulate further reflection (should you run out of things to say in less than 30 minutes).

When engaged in a reflective interview on my problem, implementing the writing process, I likely would speak of my concerns regarding the quality of the finished work the students were turning in. I might also express my frustration over seeing students repeat the same errors in each piece of their written work and their apparent willingness to accept as complete products that were far from finished. As the interview progressed, I might even share my concern that the approach I had been using, nagging, wasn’t producing the desired results. Not only was it not assisting my students with their writing, but, I might observe, it was having a detrimental impact on classroom climate. I can almost hear myself telling my colleague, “I’ve become so frustrated with this group of kids that I’m not even sure I want to teach language arts anymore!”

Here my colleague might join in, perhaps with questions like these: “Has this always been a problem for you or just with this particular group of students?” “Are you aware of any other strategies that teachers have used successfully?”

Generally it takes only a question or two to get my thoughts flowing again. Following such a query I might state that I’ve heard a number of teachers speak glowingly about the use of “peer editing.” However, I might also share my fear that with this current group of students, offering any opportunity for peer work would be an invitation to get further off task, and so on.

After 30 minutes of listening, it is time for the colleague to paraphrase what he or she heard. Often just hearing ideas reported back through another person’s voice is enough to help surface patterns in one’s concerns and, consequently, insights into what is worth taking the time to research. In this case I would likely conclude that an excellent focus for my research might be finding ways to productively motivate and assist my students with the revision of their written work.

**Strategy 3—Analytic Discourse**

This process, somewhat similar to the reflective interview, is most often used by a group of colleagues intending to pursue a research study collaboratively. In such cases one member of the group, someone acknowledged to have thought quite a bit about the issue, becomes the subject for a group interview. The interviewers are then expected to probe and push the interviewee in order to cause that person to reflect
How Is Action Research Accomplished?

deeply on the topic at hand. The purpose of the analytic discourse is to get the individual being interviewed to explore the topic as fully as possible. As with the reflective interview, the following rules must be followed to maximize the success of the analytic discourse:

- Interviewers ask probing questions.
- Interviewers offer no personal opinions.
- No critical comments are permitted.

Generally, the analytic discourse surfaces and addresses most major issues surrounding a topic after 30 to 40 minutes. However, the discourse should not be considered complete until the interviewee feels that he or she has no more to say on the topic.

Step 2—Clarifying Theories

Whatever strategy is used to surface an area of concern, the next step involves making explicit one's underlying feelings, beliefs, and insights regarding the problem or focus. It is helpful early in the action research process to explore theoretical perspectives or biases that an individual researcher or members of a research group may hold regarding the research focus. The two strategies suggested below—the priority pie and the graphic reconstruction—have proven effective for both individual and group inquiries.

The Priority Pie

The priority pie is a mechanism that helps teacher researchers identify those variables that they perceive as being most relevant to their issue. It also helps clarify personal beliefs about the relative importance of those variables. The priority pie process has three steps: (1) brainstorming, (2) conducting an intuitive assessment, and (3) drawing a pictorial representation.

First, the researcher individually brainstorms a list in response to the question:

What are the most significant factors or variables that will need to be addressed if I am to be successful helping students address this issue?

If I were making a priority pie regarding my issue with student editing, I might list the following factors or variables:

- Knowledge of grammatical rules
After brainstorming a list of factors, the researcher needs to make a judgment about the relative influence of the listed variables by assigning a percent to each item (corresponding to that item's importance to achieving the whole). The sum of the individual percentages must equal 100 percent. In my case, I might assign these percentages:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of grammatical rules</td>
<td>25%</td>
</tr>
<tr>
<td>Use of a variety of voices</td>
<td>5%</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>15%</td>
</tr>
<tr>
<td>Motivation</td>
<td>25%</td>
</tr>
<tr>
<td>Comfort with criticism</td>
<td>15%</td>
</tr>
<tr>
<td>Word processing skills</td>
<td>15%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Finally, the researcher displays the assigned percentages on a pie chart. The resulting pie graph becomes a rough visual portrayal of the initial theory held by the researcher. In my case, the priority pie (Figure 2.1) would alert me to the relative value of the variables that I believe need to be attended to if I am to succeed with my goal.

**Graphic Reconstruction**

The graphic reconstruction is a process used to further develop and explore a researcher's theoretical perspective on the issue to be investigated. In addition, it will elaborate on the researcher's ideas on how performance might be improved in this area. The product that results from this process looks like a mind map or the kind of "web" teachers often have students produce as a prewriting exercise. The function of the graphic reconstruction is to fully illustrate the researcher's understanding of the dynamic relationships between the variables identified in the priority pie. A graphic reconstruction of my perspective on how the editing process should work with my writing class would look like Figure 2.2.

At this point, it is appropriate to investigate what others have found out about the same topic. It is prudent for a researcher or an action research team to review computer databases (such as ERIC) and text
resources to identify other perspectives on the issue that are worth considering before initiating action. This step can help avoid getting too far down the road pursuing ideas that others have already thoroughly investigated.

After completing a literature review, it is time to return to the graphic reconstruction to determine whether changes to this illustration of your theoretical perspective are now necessary based upon the data, findings, and insights of other investigators.

**Step 3—Identifying Research Questions**

The next step involves reflecting on one’s focus and theory in order to identify a question or a set of questions that merit an investment of time and energy. This is accomplished by returning to the graphic reconstruction to reflect on the following key question:

*What significant aspect(s) of my theory am I relatively uncertain about and, therefore, wish or need to know more about?*
FIGURE 2.2
A Graphic Reconstruction—The Development of Student Editors

- Simulation exercises
- Guiding questions
- Group process interpersonal skills
- Comfort with criticism
- Variety of voices
- Instruction in vocabulary
- Instruction in grammatical rules
- Instruction in voice

Modeling

"Listen for" exercises

Skills in applying editing criteria

Practiced in groups

Quality Student Editors
In the case of my inquiry regarding the improvement of student editing, several possible research questions might emerge. For example, What is the relationship between student enjoyment of writing and the quality of their editing? In what ways will providing students an advance copy of a scoring rubric have an effect on the quality of their finished papers? To what extent are finished papers different when peer editing is employed?

**Step 4—Data Collection**

When collecting and analyzing data, action researchers can do a great deal to ensure the validity and reliability of their findings by using a process called triangulation. The term *triangulation* refers to the use of multiple independent data sources to corroborate findings. The purpose and necessity of corroboration is the same for the action researcher as it is for the trial lawyer. A trial lawyer knows that to convince a jury of the accuracy of a legal theory, it helps to have more than one witness; the more individual witnesses whose testimony supports the theory, the more credible the theory becomes.

Educational action researchers usually have a wide variety of data sources available to them. Some of the most common sources are the following:

*Existing data*
- School/teacher records
- Student work/portfolios

*Observation data*
- Photographs
- Videotapes
- Diaries, logs, journals
- Rating scales/rubrics
- Data obtained by shadowing students through the school day

*Probes*
- Tests
- Surveys
- Interviews
- Focus groups

A helpful tool for planning data collection and triangulation is a *triangulation matrix*—a simple grid that shows the various data sources that
will be used to answer each research question. The matrix provides the action researcher with some assurance that the potential for bias (which is always present whenever a single source of data is used) won't take on undue significance. Figure 2.3 illustrates how a completed triangulation matrix for my study on student editing might look.

**Step 5—Data Analysis**

During Step 5, data analysis, the teacher researcher engages in a systematic effort to search for patterns or trends in the data. There are many ways to accomplish this. Regardless of the particular technique employed, during the analysis phase the researcher tries to systematically cut, sift, and sort the data into piles of like or similar objects. The key purpose of this systematic sorting and categorizing is to assist in answering the following two questions:

What is the story told by my data?
What might explain this story?

Once the researcher believes the process has resulted in adequate answers to those two questions, it is time for one final return to the graphic reconstruction. This time the researcher takes a critical look at the initial theory and asks how it may need to be revised based upon the analysis of the data.

**Steps 6 and 7—Reporting and Action Planning**

The primary purpose of action research is to inform the decision making of practitioners who wish to improve their performance. This was the case in the example of my work on student editing. For this reason, when an individual teacher is doing the action research on an individual problem, it is less necessary to make the last two steps of the process—reporting and action planning—public or formal. In my case, it might have been enough for me to simply see what worked and in which circumstances and then to adjust my instructional planning accordingly. If the teacher researcher wishes to share his or her findings, popular venues include grade-level or departmental meetings, faculty forums, or parent-teacher meetings. The choice of reporting venue ultimately resides with the researcher, but the purpose for the sharing should always be the same: to invite open and collegial dialogue on ways educators can enhance student learning.
When, however, the rationale for engaging in the research is school improvement (as opposed to teacher development), then a public, inclusive, and participatory process for reporting and the subsequent action planning is absolutely necessary. The final section of this book (Part IV) provides specific guidance on ways to use action research as part of a collaborative, culture-building process to advance a school improvement agenda.

### A Shift in Focus

Chapters 1 and 2 introduced the process of action research and described some of the ways it has been carried out in schools. I hope this discussion
has intrigued you enough to encourage you to learn more about specific practices engaged in by practitioner researchers.

However, these days it takes more than an intriguing idea to get an educator's full attention. Never before have teachers faced so many demands. Not only are the complexity and diversity of today's students and the issues they bring into classrooms more challenging than ever, but the expectations that society holds for academic performance have never been higher. Teachers who are already working as hard as they can must attend to new state standards, high-stakes testing programs, graduation requirements, and college admissions standards. In most locales teachers are being asked to incorporate new technologies, new evaluation procedures, and alternative teaching methods into their daily routines. Furthermore, all of this is happening during a period of declining resources and increased class sizes. Having a good idea to share (like action research) is not enough to garner the full attention of today's educator.

For this reason, I'd like to pause for a moment, step back from this examination of research methods, and shift attention to why I believe the present time, even with all of its pressures, is a most propitious time for implementing the strategies and techniques of reflective practice. The next two chapters discuss the context of public education in North America at the turn of the 21st century and present a rationale for investing time in action research.

I believe we are at a crossroads. The particular actions and decisions that educators make in the first years of the 21st century will likely determine the future and nature of the education profession. The pressures currently being exerted on classroom teachers could result in a return to highly bureaucratic structures in schools or, alternatively, give rise to a radical restructuring of the role of the classroom teacher. In the following two chapters I present the case that if we truly wish this era of reform to result in a renewal of the inherent nobility of teaching, then this is "prime time" to invest in teacher research.