Introduction to Action Research

Action research: “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 or refining his or her actions.”

—Sagor (2000)

WHY CONDUCT ACTION RESEARCH?

Listening to the media, one could easily conclude that those most passionate about school improvement are the consumers of education, parents, students, and their future employers. But while the general public is clearly interested in school reform, no group of people is more passionate about promoting universal student success than classroom teachers. Most days, even the most celebrated teachers teaching highly successful students leave their classrooms frustrated, feeling that despite their best efforts, they failed to help every student progress as far as he or she might. The ritual is replayed on a daily basis; the exhausted teachers drive home wondering why things hadn’t gone better and then hoping against hope that tomorrow would be a better day.

I doubt that there’s a single teacher working today who didn’t enter the profession committed to helping every single student prosper. Andy Hargreaves (1991) has pointed out that the greatest emotional battle teachers face today is guilt. This is borne of the realization that they aren’t generating the levels of success they had desperately wanted and still hope to achieve. Anyone who has engaged in the art and science of teaching knows that this debilitating experience of continually falling short of your own high expectations is not the result of a lack of commitment, caring, or intellect. So what does account for this situation?
Several things conspire to keep teachers in this chronic state of falling short. One is the high expectations that teachers, parents, and society set. There is no question that the higher the bar, the greater the pressure. But no one who cares about youth would want to set the bar lower. Nevertheless, it must be acknowledged that the goal of universal student success, a dream held by most teachers and an expectation now codified in state and federal regulations, has never been achieved on a large scale. To my knowledge, in the history of humankind, no community has ever succeeded in getting all its children to high levels of performance on meaningful standards—which is the current expectation of education policy throughout North America. Therefore, not only are today’s teachers in pursuit of high expectations, but they are also being pushed to travel where no one has traveled before. And they are going into this wilderness without a guidebook, a map, or a recipe.

Besides having to meet their own and society’s high expectations, there are two other significant factors that contribute to chronic teacher frustration:

- The complexity of the art and science of teaching
- The way teacher work is organized

The good news is that both of these can be addressed without having to abandon the high expectations we hold for our students.

THE COMPLEXITY OF TEACHING

Any problem, be it personal, social, or scientific, can be expressed in the form of a mathematical equation. Arriving at a solution requires giving consideration to all potential possibilities and probabilities. Every variable (factor) involved in the decision needs to be considered in light of (multiplied by) each of the other variables. For example, when I am deciding what I should wear to work on Thursday, the decision-making equation that expresses this problem is

\[(A) \times (B) \times (C) \times (D) = X\]

\[\begin{align*}
A &= \text{Shirt choices} \\
B &= \text{Pants choices} \\
C &= \text{Tie choices} \\
D &= \text{Shoe choices}
\end{align*}\]

The problem confronted at least 12 times per day by the elementary teacher and minimally 5 times daily by the secondary teacher is determining the best answer to this question:

What is the most appropriate strategy for teaching this material to this particular group of learners?

Coming up with a solution requires the teacher to consider a multitude of variables. To illustrate, let’s assume I am a middle school math teacher who is preparing to introduce the concept of signed numbers. The variables that I must take into account begin with all the relevant affective factors. For example, I will need to consider how each one of my students feels about me, about math, about themselves as math learners,
about our classroom, and so forth. Then I will need to multiply these variables by 30, if
that’s the number of students I’ve been assigned and assuming my goal is to meet the
needs of each of them. If this looks complex, just wait; this is only the beginning.

Of course, I must also take into account the cognitive characteristics of each
learner. For example, what prerequisite skills do the students possess or what
skills are students missing? Where they are developmentally? What is their strong-
est learning style? And what conceptual understandings are they bringing to this
particular math concept?

That’s a lot to take into account, but simply knowing the affective and cognitive
characteristics of my students is only one aspect of the equation. Even if I know each
student perfectly, that still doesn’t tell me how to teach them. There are at least two
other things I must consider when designing my lesson. As a professional, I will
want to apply everything I know about pedagogy (methods of teaching). For
example, I could elect to teach this bit of content using direct instruction. Or I could
use individually guided instruction, cooperative learning, modeling, and so on. As
complex as all this is, just considering these factors isn’t enough. For deep learning
to occur, my lesson plan should also be grounded in a thorough understanding of
the discipline itself. Specifically, what is the rationale for teaching this particular
piece of content (in this case, signed numbers)? How does this fit conceptually with
previous content and upcoming material? What are the specific skills I will want
my students to gain from the study of this material?

Without belaboring the statistical aspect of this decision-making equation, it
should now be clear that each and every lesson-planning decision made by a pro-
fessional teacher requires the consideration and integration of literally thousands of
factors. In reality, designing appropriate lessons for public school students is one of
the most complex tasks any contemporary professional ever has to face.

But the complexity of the decision making is only part of the problem. After all,
in many fields, being expected to creatively solve complex problems is not a source
dissatisfaction. In fact for many professionals, engaging in problem solving is
what makes the work fun and motivating. Even as complex as teaching is, we aren’t
the only practitioners that are expected to grapple with perplexing, mind-numbing
problems on a daily basis. So why does the complexity of the work create more
frustration for educators than for most other professionals?

To answer that question, we need to take a look at the second problematic
issue: the work context for most teachers. Even if the issues that a professional must
overcome are complex, when the working conditions are such that the practitioner
has reason to believe there is a decent chance of prevailing, there is justification for
optimism. Unfortunately, the reverse is also true: If the conditions of work are such
that it is unreasonable for a person to expect success, then pessimism, alienation, and
burnout should be expected.

In other fields where practitioners are expected to prevail over unique and
complex problems, two types of support are usually present: planning time and
support staff. Unfortunately, neither adequate planning time nor support staff is
being provided for today’s teachers. These are critical working conditions that ought
to be addressed, and hopefully, we will one day secure the political will necessary to
provide these resources for teachers. Realistically, however, this isn’t likely to occur
in the near future. On the positive side, there are other things we can do to address
the conditions of work in the short run. This is where this book fits in.

Action research is a small idea. Although there isn’t one universally accepted
set of processes that constitutes action research, as presented here, it is a simple
four-stage process:
1. Clarifying vision and targets
2. Articulating theory
3. Implementing action and collecting data
4. Reflecting on data and planning informed action

These four stages help us bring to the surface the critical knowledge and insights we need to improve our practice and come ever closer to the goal of universal student success. As with many simple ideas, the ramifications can be huge. The greatest virtue of action research is its potential for radically transforming the conditions of work for the classroom teacher, specifically those conditions that when left unaddressed will frustrate and burn out our best and brightest.

In settings where the norms and practices that are supportive of action research have been institutionalized, teachers are achieving success, as demonstrated by continuous improved performance by students and a reduction in the achievement gap (Little, 1982; Rosenholtz, 1985). Better yet, in these settings, teachers are finding their work more satisfying, more energizing, and less guilt producing.

In the chapters that follow, we will explore numerous strategies used by teachers to accomplish the four stages of the action research process. You will encounter concrete examples of how teachers have worked through each of the stages and explore strategies with step-by-step instructions and sample materials that you can use as is or adapt for use with your own action research. As we work our way through the process, we will continue to return to the working conditions issues (complexity, time, and support) and explore ways that the habits of action research could help you manage them.

KEY TERMS AND CONCEPTS

Action Research

At the start of this chapter, we offered a definition of action research that indicated that it is an investigation conducted by the person or the people empowered to take action concerning their own actions, for the purpose of improving their future actions. It would be helpful to expand on this so that we can clearly distinguish action research from other forms of scientific or educational research. The best way to decide if an inquiry qualifies as action research is to ask three questions about the proposed study. If the answer to all three is “yes,” then the inquiry justifiably fits under an action research umbrella. If the answer to any of the questions is “no,” then while it might be an area worth investigating, action research isn’t the appropriate approach. These are the questions:

1. Is the Focus on Your Professional Action?

If you are studying your own work, then the answer to this question is clearly “yes.” In addition, if you are studying something that you are considering making part of your work in the future, then the answer can also be “yes.” According to Kemmis and McTaggart (1988), there are three types of action that can legitimately serve as foci for action research:

Research of action (past action): In this case, the action being studied has been completed (e.g., an evaluation study).
Research in action (present action): In this case, the action is underway (e.g., a monitoring study).

Research for action (future action): In this case, the action will occur in the near future (e.g., evaluating materials for adoption).

2. Are You Empowered to Adjust Future Action Based on the Results?

This question pertains to your sphere of influence. Most teachers are free to adjust their instructional strategies as they deem appropriate. Therefore, considering an investigation into a new approach for instruction justifies a “yes” to this question. This is because the teacher-researchers are free to change their teaching based on the data they gather. Likewise, members of a school improvement team are often empowered to make changes for their entire school and therefore could answer this question with a “yes” for a study that was examining a schoolwide issue. If circumstances prevent you from being able to make changes, regardless of what the data reveal, you will have to answer “no” to this question.

3. Is Improvement Possible?

Although we all know that research for its own sake is a worthy pursuit, the only justification for practicing educators to invest valuable time in research is if the inquiry holds promise for helping them be more successful with their teaching. If you hold serious doubts that performance can in fact improve in a particular area, then you would be wise not to embark on action research concerning it.

To recap, an investigation qualifies as action research if it pertains to one’s professional action, focuses on an aspect of one’s work where one has a significant degree of control, and where (with enough information) improvement can be expected to occur.

The Four Stages

As you pursue the action research process through its four sequential stages, you will find that each stage is designed to help you answer a key question.

Stage 1: Clarifying Vision and Targets

Key question: What do I want to accomplish?

In Stage 1, action researchers clearly enunciate their goals, clarify each of the subskills or attributes that contribute to success for each goal, and specify detailed criteria that can be used with validity and reliability to document improvement. Ways to accomplish the tasks of Stage 1 and answer its question are examined in Chapters 2 and 3.

Stage 2: Articulating Theory

Key question: What do I believe is the approach with the greatest potential for achieving my goal(s)?

In this stage, action researchers articulate a detailed rationale for proceeding in a particular fashion. Earlier we talked about the many factors that need to be
considered when making a lesson-planning decision. When there is no proven best way to accomplish a goal, professionals will often pursue alternative approaches that they deem theoretically sound. It is in Stage 2 that action researchers engage in a deliberate planning process that involves examining and incorporating all of the dynamic relationships between the relevant factors or variables that might influence success in realizing the vision or targets identified in Stage 1. We work through the processes for articulating your own theory of action and answering Stage 2’s key question in Chapters 4 and 5.

Stage 3: Implementing Action and Collecting Data

*Key question:* What data will I need to collect to understand the efficacy and workings of my theory of action?

This is the portion of the action research process that takes place during actual teaching, our professional action. It is here that we carry through on our theory of action while systematically compiling information (data) to help us understand what is going on, both above and below the surface. This is where we determine what is being accomplished and the relationship between the actions being taken and the results being obtained. Work on Stage 3 begins in Chapter 6, where you learn how to generate a set of research questions to guide your study. Then in Chapter 7, you learn how to develop a viable data-collection plan aimed at producing valid and reliable answers for those research questions.

Stage 4: Reflecting on the Data and Planning Informed Action

*Key question:* Based on this data, how should I adjust my future actions (teaching)?

Stage 4 is where we complete the first lap around the action research cycle. It is here that action researchers return and revisit their visions or targets (Stage 1) as well as their previous thinking on the best way to realize that vision (Stage 2). Then based on data regarding the impact of their actions (Stage 3) and an analysis of those data, action researchers produce a revised theory of action, which then forms the basis for future action. Figure 1.1 illustrates the cyclical nature of the work accomplished through the four stages.

The Two Categories of Action Research

Action research, like most types of inquiry, is generally undertaken for one of two purposes:

- To determine what is currently occurring
- To test a hypothesis (theory)

When researchers seek to understand what is occurring, they are engaging in what is called *descriptive research.* When the research is primarily concerned with testing a hypothesis, the inquiry is called *quasi-experimental research.* (The qualifier “quasi” is used here because in the social sciences, it is both ethically and practically impossible to implement a classic experimental design, since that would require a control group. Research that seeks to test a hypothesis without a control group is classified as quasi-experimental. This problem will be discussed in greater length in Chapter 7.)
Quasi-Experimental Research

As teachers, we are frequently involved in quasi-experimental research, although most of us haven’t been in the habit of documenting our studies. Every day, teachers make use of the best approaches they know. Yet it is a very rare day when all the students in a class accomplish everything they possibly could. More often than not, when we reflect on why a student or group of students hasn’t succeeded, it triggers some creative thinking. We find ourselves asking, “What if...?” When we are pondering the what-ifs, we are considering ideas or hypotheses that we might investigate. If we decide to attempt something new, we are saying that we believe this approach is likely to produce superior outcomes than the ones we had obtained before. When you decide to focus on the use of a new or modified idea, your research becomes a quasi-experimental study of the adequacy of that idea, or what is called in this text, your *theory of action*. Because of the dynamic and ever-changing nature of teaching, it shouldn’t be surprising that this is the most common form of action research.

Descriptive Research

There are many times when we find ourselves concerned about something occurring in our classrooms, with our kids, or in our schools. We know that we want to do something about the problem, but we don’t feel we currently understand the issue in the context of our school or classroom well enough to design an effective strategy for improvement. When this occurs, our ultimate goal is no different than that of educators who have decided to conduct quasi-experimental research. All desire to
learn what we need to know to improve performance; it is only the focus that is different. While the lens of the quasi-experimental researchers is trained on the efficacy of a particular innovation (their theory of action) and its impact, the lens of the descriptive researchers is on the system or approach that is currently in place (the operative theory of action) and trying to understand its workings. Whatever the focus of your study, be it your theory or the operative theory, at Stage 4, all action researchers end up doing the same thing: producing a plan for future action based on data regarding what occurred in the past. Figure 1.2 contrasts these two types of research across the four stages of the action research process.

It is worth noting that these two categories of research (quasi-experimental and descriptive) are not mutually exclusive. Sometimes they even occur simultaneously. In Chapters 7 and 8 we will explore an example of action research being conducted by a hypothetical fifth-grade teacher, Ms. Pioneer. She is implementing a theory of her own design. Her theory of action involves making use of cooperative learning and multimedia technology in her teaching of social studies content. The major thrust of her study is quasi-experimental, as she wants to understand if and how her theory of action is succeeding in furthering her goals. But at the same time, she will be conducting a study within a study. This is because she has a particular student in class, Joann Heathrow, who is a real handful. Joann hasn’t experienced much success in Ms. Pioneer’s class, nor has she been successful in any other teacher’s classroom. Ms. Pioneer would like to see Joann doing better but has been unable to develop confidence that any specific strategy will help this ADHD child succeed with her curriculum. She is interested in examining Joann’s experience in her class (a descriptive action research study), not primarily to understand her program but to better understand how the instructional environment and Joann interact with each other. Ms. Pioneer’s hope is that after gathering more data on Joann’s experience, she will be better able to develop a theory of action for helping Joann achieve success within the classroom.

It should be noted that descriptive and quasi-experimental are not simply synonyms for qualitative and quantitative research. While qualitative research methods are used to paint a robust picture of a phenomenon, they are also frequently used by action researchers conducting quasi-experimental studies. For example, in trying to determine the impact of a new innovative reading program (a quasi-experimental study), I might use qualitative data drawn from student reading journals and observational notes. Likewise, a team conducting a descriptive study aimed at understanding the climate at their school might use a survey where students and teachers rate attributes of the school on a 10-point scale (a qualitative method). Most action research studies end up making use of both qualitative and quantitative data-collection methods.

### UNIVERSAL STUDENT SUCCESS

As mentioned earlier, most teachers approach their work with very high expectations. Ultimately, our goal is to have all students doing their very best work and becoming as skillful as possible. This is not unlike physicians approaching their work with the goal of curing every condition and helping every patient live a long and vigorous life. Realistically, we know that this can’t and won’t happen all at once, if ever. Rome wasn’t built in a day, and all human illness will not be eradicated in one fell swoop. Likewise, figuring out how to assist all learners to realize their potential will take time. But as inquiring professionals, we want to be continuously advancing our
### Figure 1.2 Comparison of Four-Stage Action Research Process Between Quasi-Experimental and Descriptive Research

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<tr>
<th>Stage</th>
<th>Quasi-Experimental Research</th>
<th>Descriptive Research</th>
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<tbody>
<tr>
<td>1: Clarifying vision and targets</td>
<td>The researchers draw clear and robust pictures of the desired outcomes. They attempt to visualize and imagine success in as much detail as possible. The researchers identify the subcomponents of their vision. For each critical component, they decide on criteria to assess changes occurring with that component.</td>
<td>Same as quasi-experimental</td>
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<td>2: Articulating theory</td>
<td>The researchers consider their own experience as well as the experience of others attempting to realize the vision and its components. Based on this examination, the researchers develop a new theory of action that involves a modification of past practice and holds promise for improving performance. The new theory of action becomes the focus of study.</td>
<td>The researchers consider their own experience as well as the experience of others attempting to realize the vision and its components. After reflecting on personal experience and the experience of others, the researchers conclude that more information (on what is occurring and how things are working) would be helpful. The researchers clarify the operative theory of action (what is now being done), which becomes the focus of their study.</td>
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<td>3: Implementation, collecting data</td>
<td>The researchers examine the new theory of action and determine a set of questions that they need or want to have answered. The researchers develop a viable plan for collecting the necessary data. The researchers implement the new theory of action and collect the data as outlined in their plan.</td>
<td>The researchers examine the operative theory of action, looking for aspects of the theory (i.e., strategies, materials, outcomes, etc.) whose effects need to be better understood. The researchers develop a viable plan for collecting the data needed to illuminate the implementation of the operative theory. The researchers collect the data as indicated in their plan.</td>
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<td>4: Reflecting on data, planning informed action</td>
<td>The researchers compile and summarize the data collected in Step 3 and generate a list of findings. Using these findings, the researchers summarize any insights gained regarding the realization of the vision. The researchers develop a revised theory of action incorporating new and relevant insights. The researchers make plans to implement the revised theory of action.</td>
<td>Same as quasi-experimental</td>
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wisdom on what it will take to realize universal success. In the next chapter, we begin working on Stage 1, where you are asked to take stock of your vision for student success. To do this, you articulate a vision of truly outstanding performance so that you will be able to incrementally measure your success as you move ever closer to assisting every student accomplish all that he or she can. When we use the term *universal student success*, that is precisely what we mean. It is that Promised Land that we are always reaching for, that wondrous time and place where all of us educators are in possession of all that needs to be known to maximize the learning for all of our students.

With this as our goal, it is likely that this collective search for answers to the perplexing problems of teaching and learning will keep us occupied for the rest of our careers. However, as long as we are purposefully engaged in the action research process and see evidence that we are continuing to learn our way forward along the road to universal student success, we can anticipate a career of celebrations, when we can stop and collectively acknowledge each breakthrough being made along the way.