
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 politicians and policy makers, one might conclude that the consumers of education—parents, students, and their future employers—are those most passionate about school improvement. While the general public is clearly interested in school reform, no group of people are more emotional and passionate about promoting universal student success than classroom teachers. Most days, even the most celebrated teachers, who are teaching the highest-achieving students, leave their classrooms frustrated, feeling that despite their best efforts, each individual student didn’t progress as far as he or she might. The ritual is replayed on a regular basis; exhausted teachers driving home every day wondering why things hadn’t gone better and then hoping against hope that tomorrow would be a better day.

I've yet to meet the teacher who didn't enter the profession with a commitment to helping every one of their students prosper. Andy Hargreaves (1991) has insightfully pointed out that the greatest emotional turmoil faced by contemporary teachers is guilt. This guilt grows from the realization that they seem unable to generate the level of student success they desire. It is clear to anyone familiar with today's schools that this guilt syndrome, the debilitating experience of continually falling short of your own high expectations, isn't the result of a lack of commitment, caring, or intellect.

Several things conspire to keep educators 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, while we pursue high expectations, we should acknowledge that the goal of universal student success, a dream held by most educators and an expectation now codified through state and federal regulations, has never been realized 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 throughout North America. Therefore, not only are today's educators pursuing lofty goals, but they are being pushed to travel where no one has traveled before. And many of them feel they have been abandoned in 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 educator frustration:

- The complexity of teaching and learning
- The way teacher work is organized

The good news is that both of these contributing factors can be addressed while we advance on the goal of universal student success.

THE COMPLEXITY OF ROUTINE INSTRUCTIONAL DECISIONS

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 (and 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

$$(A) \times (B) \times (C) \times (D) = X$$

A = Shirt choices

B = Pants choices

C = Tie choices

D = Shoe choices

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 the question

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

Coming up with a viable answer requires the teacher's consideration of a multitude of variables. To illustrate, let's assume I am a middle school math teacher who is preparing a lesson where I will introduce the concept of signed numbers. The variables that I must take into account begin with 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, assuming that is the number of students I'm assigned and my goal is to meet each of their needs. If this sounds 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 does each student possess or what skills is the student missing? Where is this student developmentally? What is her strongest learning style? And what conceptual understandings is she bringing to this math concept?

That's a lot to take into account, but simply knowing the affective and cognitive characteristics of each one of my students is only one aspect of the equation. Even if I understand each student perfectly, that still won't tell me how to teach them. There are at least two other sets of factors that I must consider when designing a lesson. Being a professional, I will want to consider the knowledge base on pedagogy (methods of teaching) and choose the most appropriate method. For example, I could elect to teach this 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 the affective, cognitive, and pedagogical factors won't solve this equation. For meaningful learning to occur, my lesson plans need also be grounded in a thoughtful understanding of the discipline itself. Specifically, what is the purpose for teaching this particular piece of content (in this case, signed numbers)? How does this concept fit with previously taught content and how does it relate to the upcoming material? What are the specific skills I 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 professional teacher requires the consideration and integration of a multitude of factors. In reality, designing appropriate lessons for a class of public school students is one of the most complex tasks any contemporary professional is ever asked to face.

The Way Teacher Work Is Organized

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 of frustration or dissatisfaction. In fact for many professionals, engaging in problem solving is the very thing that 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 designing innovative solutions to persistent problems prove more frustrating for educators than for many professionals in other fields?

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 are provided for today's educators. These are critical working conditions that will need to be addressed, and, hopefully, one day we will secure the political will necessary to provide these resources for all classroom teachers. Realistically, however, this isn't likely to occur in the near future. On the positive side, there are other things that can be done to address the conditions of work in the short run. This is where this book fits in.

Action research is a small idea. It involves examining data on your work to help improve your performance. Although there isn't agreement on a single set of processes or steps that constitute action research, as presented here, it is a straightforward four-stage process. The four stages of action research are as follows:

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 bring to the surface the critical knowledge and insights we need to improve our practice and move 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 some of the most critical working conditions of the classroom teacher, specifically those conditions that when left unaddressed, will frustrate and burn out our best and brightest. The cultural norms and organizational practices that support professional inquiry have an impact on student performance (Reeves, 2010). In schools where the ethic of action

research has been institutionalized, teachers routinely experience success, as demonstrated by continually improving student performance and a reduction in achievement gaps (Little, 1982; Rosenholtz, 1985; Hattie, 2008). Better yet, in these settings, teachers find their work more satisfying, more energizing, and less guilt producing (Nir & Bogler, 2008).

In the chapters that follow, we will explore numerous strategies used by teachers as they work through the four stages of the action research process. As you read through this text you will encounter specific examples of teachers working through each of the four stages and explore the strategies they employed. Each example is followed by step-by-step instructions and sample materials for your use or for you to adapt for use with your own action research. As we wind our way through the four-stage process, we will constantly return to the issues of teacher working conditions (complexity of the challenges, limitations on time, and support) and explore how incorporating the habits of action research into your work can help you improve the conditions of your own work.

KEY TERMS AND CONCEPTS

Action Research

At the start of this chapter, we offered a definition of action research that said action research was any investigation conducted *by the person or the people empowered to take action concerning their own actions, for the purpose of improving their future actions*. At this point it would be helpful to expand on that definition 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 questions 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 probably isn’t the appropriate approach. The questions are as follows:

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 an issue 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 (such as an evaluation study).

Research in Action (Present Action): In this case, the action is underway (as in a monitoring study).

Research for Action (Future Action): In this case, the action will occur in the near future (for example, 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, a proposed investigation into a new instructional strategy probably merits a “yes” to this question. This is because most teacher-researchers are free to adjust their teaching based on the data they collect in the classroom. Likewise, the members of a school’s improvement team who were examining a schoolwide issue and felt that they were empowered to institute changes for implementation in their building would answer this question with a “yes.” If, however, circumstances will prevent you from implementing changes, regardless of the data assembled, then 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 K–12 educators to invest their finite time in research is if the particular inquiry holds promise for increasing the success of their teaching or learning in their schools. If you hold serious doubts that performance can be improved in a particular area, then you would be wise to avoid 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 focuses on a particular area 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 identify specific criteria that can be used with validity and reliability to document changes in performance. Ways to accomplish the tasks of Stage 1 and answer its question are the focus of Chapters 2 and 3.

Stage 2: Articulating Theory

Key Question: What approach do I believe has the greatest potential for helping me to realize my goal(s)?

In this stage, the action researcher articulates 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 may elect to pursue alternative strategies that seem theoretically sound. It is in Stage 2 where the action researchers engage in a deliberate planning process that involves examining and incorporating all the dynamic relationships and interactions they believe exist between the relevant factors that might influence their success in realizing their vision or the performance targets identified in Stage 1. We will work through several processes for articulating your 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 if I am to understand the effectiveness of my theory of action?

This is the portion of the action research process that takes place while we work, that is, while we take 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. Our work on Stage 3 will begin in Chapter 6, where you will learn how to generate a set of research questions to guide your study. Then in Chapter 7, you will develop a viable data-collection plan designed to produce valid and reliable answers for your 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 becomes the basis for future action. Figure 1.1 illustrates the cyclical nature of the work accomplished through the four stages.

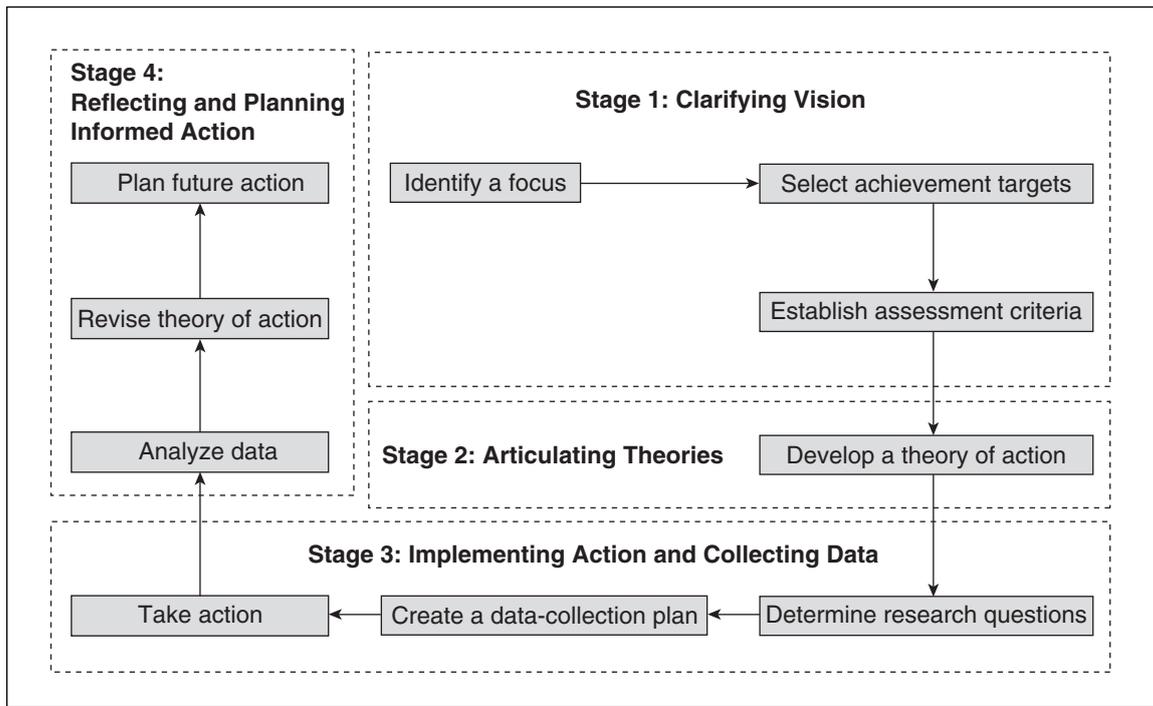
The Two Categories of Action Research

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

1. To determine what is currently occurring
2. 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

Figure 1.1 Action Research Cycle



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.)

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 one sees undertaken in schools.

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 long-term goal is no different than that of educators who have decided to conduct quasi-experimental research. In both cases, the desire is to learn what we need to know to improve performance; it is only the immediate focus that is different. While the lens of the quasi-experimental researcher is trained on the efficacy of a particular innovation (the theory of action) and its impact, the lens of the descriptive researcher 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: they produce a plan for future action based on valid and reliable data regarding what has occurred. 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 can 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 for cooperative learning. 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 her 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, if I were trying to determine the impact of a new innovative reading program (a quasi-experimental study), I might want to use qualitative data drawn from student reading journals and observational notes to illuminate the phenomena under study. Likewise, a team conducting a descriptive study aimed at understanding the climate at their school might use a numerical survey, where students and teachers rate attributes of the school on a 10-point scale (a qualitative method). In reality, most action

Figure 1.2 Comparison of Four-Stage Action Research Process Between Quasi-Experimental and Descriptive Research

<i>Stage</i>	<i>Quasi-Experimental Research</i>	<i>Descriptive Research</i>
1: Clarifying vision and targets	The researchers draw clear and robust pictures of the desired outcomes. An attempt is made to visualize and imagine success in as much detail as possible.	Same as quasi-experimental
	The researchers identify the subcomponents of their vision. For each critical component, they decide on criteria to assess changes occurring with that component.	
2: Articulating theory	The researchers consider their own experience as well as the experience of others attempting to realize the vision and its components.	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.	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 new theory of action becomes the focus of study.	The researchers clarify the operative theory of action (what is now being done), which becomes the focus of their study.
3: Implementing action, collecting data	The researchers examine the new theory of action and determine a set of questions that they need or want to have answered.	The researchers examine the operative theory of action, looking for aspects of the theory (strategies, materials, outcomes, and so on) whose effects need to be better understood.
	The researchers develop a viable plan for collecting the necessary data.	The researchers develop a viable plan for collecting the data needed to illuminate the implementation of the operative theory.
	The researchers implement the new theory of action and collect the data as outlined in their plan.	The researchers collect the data as indicated in their plan.
4: Reflecting on data, planning informed action	The researchers compile and summarize the data collected in Step 3 and generate a list of findings.	Same as quasi-experimental
	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.	

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. 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 wisdom on what it will take to realize a vision of universal success. In the next chapter, we begin working on Stage 1, where you will be asked to take stock of your personal vision of success. To do this, you will articulate a picture of truly outstanding performance that will be detailed enough to enable you to incrementally measure your success as you move ever closer to assisting every student in achieving proficiency. When we use the term *universal student success*, that is precisely what we mean. It is that Promised Land that we are constantly reaching for, that wondrous time and place where all of us educators are in possession of all that we need know to maximize the learning of all of our students.

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