explain outcomes (quantitative) and the need to explore (qualitative). The research questions are posed as both quantitative and qualitative questions, and the data collection appears in one section, displaying an integration of quantitative and qualitative forms. The data analysis represents an attempt to converge the two databases, with the results and interpretation molded into information that sheds light on the research problem. This structure results in a convergent design.

MyLab Education Self-Check 16.5

MyLab Education Application Exercise 16.4: Reading Research: A Mixed Methods Research Study

HOW DO YOU EVALUATE A MIXED METHODS STUDY?

As a form of qualitative and quantitative research, mixed methods research needs to use consistent criteria. There are specific aspects that people reading, evaluating, and conducting a study might consider. Table 16.3 offers the key elements of quality and the indicators of higher quality and those of lower quality. The key elements are presented in the order of their importance in a mixed methods study.

TABLE 16.3

Evaluating the Quality of a Mixed Methods Study

Quality Criteria	Indicators of Higher Quality	Indicators of Lower Quality
The Key Elements		
The mixed methods researcher uses the words "mixed methods" in the study.	The researcher uses the words "mixed methods" in the title (or purpose statement) for the study.	The researcher refers to the study as a "quantitative and qualitative" study (or refers to surveys and focus groups) and does not use the words "mixed methods."
The mixed methods study contains both quantitative and qualitative data.	In the methods section of the study, the researcher conveys details about the data collection and analysis of both quantitative and qualitative data.	The researcher does not detail the quantitative and qualitative data collection procedures, and thus they are difficult to determine, such as the sampling, the forms of data collection, and other elements.
The mixed methods report displays an integration of the quantitative and qualitative data.	The researcher mentions the specific ways in which the two forms of data will be integrated, such as by merging the data, building from one database to another, explaining the data, or embedding the data.	The researcher does not mention the specific form of integration used in the study, or if it is briefly mentioned, the researcher does not specify the type of integration that occurred in the study.
The researcher specifies a type of mixed methods design.	The researcher identifies the design being used as basic or advanced, offers a brief definition of it, and presents a visual diagram of the design used in the study.	The researcher may specify the type of design used in the study but does not explain it, discuss its procedures, or present a visual diagram of the design.
The researcher cites mixed methods literature to document the use of mixed methods.	The researcher cites empirical studies in his or her area that use mixed methods and identifies important books or journal articles on mixed methods.	The researcher makes no mention of the literature on mixed methods, either the journal articles or the books on the subject.

MyLab Education Self-Check 16.6

MyLab Education Application Exercise 16.5: Reading Research: Evaluating a Mixed Methods Research Study

KEY IDEAS IN THE CHAPTER

Mixed Method Research, Its Use, and Its Development

With a better understanding of qualitative research and the advantages of collecting both quantitative and qualitative data, mixed methods research designs are becoming popular in education. From initial multimethod quantitative studies, designs have emerged that incorporate quantitative data (e.g., scores from instruments, scores from observations, and census data) and qualitative data (e.g., open-ended interviews, observations, documents, and visual materials). Today, writers talk about a distinct design in education—the mixed methods design—in which investigators collect, analyze, and integrate quantitative and qualitative methods in order to best understand a research problem. It is the integration of the two methods, rather than simply collecting and analyzing quantitative and qualitative data, that makes mixed methods a unique approach to educational research.

Types of Mixed Methods Designs

Six types of mixed methods designs exist, and they may emerge during a project or be advanced (and possibly modified) in the process of conducting a study. The three basic designs are at the heart of all mixed methods projects. These basic designs may then be organized with a framework, such as an experiment, a social justice, or a multistage evaluation project. In terms of basic designs, the convergent design includes the collection of both quantitative and qualitative data simultaneously with the purpose of merging or integrating the data. The explanatory sequential design begins with quantitative data collection and analysis followed by qualitative data collection and analysis. In this way, the researcher follows up on quantitative findings with qualitative explorations. The exploratory sequential design reverses the data collection procedure. The mixed methods researcher first gathers qualitative data and then builds on the analysis of it using quantitative data. The experimental design includes collecting qualitative data within the framework of an experiment, whereas the social justice design employs the use of a theoretical framework (e.g., feminist research) as an orienting lens for the entire study. The specific mixed methods designs within this framework can be any of the three basic designs or some combination of them. The multistage design is a mixed methods evaluation project conducted over time using multiple phases or projects that build from a needs assessment to program implementation. Any combination of the three basic mixed methods designs can be used within this framework.

Key Characteristics of Mixed Methods Research

Mixed methods procedures have developed to a point where we now can identify major characteristics of this approach to research. Mixed methods researchers need to collect and analyze both quantitative and qualitative data and to use methods that are rigorous and systematic. Furthermore, both forms of data need to be integrated through procedures of merging, connecting, explaining, and embedding. Another hallmark of mixed methods research consists of using a mixed methods design that employs procedures within one of the three basic designs and then perhaps adding a framework,

such as an experiment, a social justice orientation, or a program evaluation perspective. Finally, mixed methods studies often include a theory that is being tested or explored, such as a social science theory. The researcher in the study may also take a philosophical stance.

Potential Ethical Issues in Mixed Methods Research

Ethical issues are becoming part of the conversation for mixed methods research. Many works have been written about ethical issues in using a social justice design, and these issue focus on respecting individuals and underrepresented groups. Ethics in mixed methods does need to relate to important issues arising in both quantitative and qualitative research. Moreover, ethical concerns can relate to mixed methods designs because different types of design raise specific ethical issues that need to be anticipated by the researcher.

Steps Used in Conducting Mixed Methods Research

The steps in conducting a mixed methods design involve assessing the feasibility of the study and presenting intent (or rationale) for mixing methods. Steps also involve making decisions about the priority and sequence of the analysis and developing research questions for the study. Researchers then collect both quantitative and qualitative data and analyze them together or separately (or both), depending on the design. The final research report may present the study as one phase or as two phases, based on the research design chosen for the project.

Evaluating a Mixed Methods Study

Mixed methods studies need to be of high quality. This means that the study needs to be called a "mixed methods" project and that the researcher needs to specify the use of both quantitative and qualitative data and how the methods will be integrated in a study. Furthermore, the design needs to be identified, described, and visualized. A working knowledge of mixed methods would also add to quality when the researcher mentions specific journal articles and books in the mixed methods literature.

Useful Information for Consumers of Research

- Because researchers have only recently identified mixed methods as a specific design in educational research, authors of studies may not label their research as mixed methods (although this is becoming more frequent). You might identify a mixed methods study by determining whether the researchers identify their study as mixed methods and whether they collect and integrate both quantitative and qualitative data to examine a research problem.
- When reading a mixed methods study, look for a diagram of the procedures to help you understand the flow of activities in the mixed methods research. If such a visual is not present, you may want to sketch out the sequence of activities, including the time sequence for collecting quantitative and qualitative data, how they were analyzed, and the intent for using both forms of data.
- Because both quantitative and qualitative data are being collected, you might judge a mixed method study on the basis of both quantitative and qualitative criteria. Look in journals reporting mixed methods studies for criteria for assessing mixed methods studies or see Table 16.3.

- To locate useful information from mixed methods studies, look for the detailed picture that emerges from qualitative research and the generalizable results that emerge from quantitative research. This combined impact—the detail and the general—can help you best understand a research problem in education.

Useful Information for Producers of Research

- When presenting your mixed methods research to others, discuss your design as a distinct design in educational research.
- In the design of a mixed methods study, identify the advantages that will accrue from collecting and integrating both quantitative and qualitative data. Let these advantages point you toward the most appropriate design (e.g., convergent, explanatory, exploratory, experimental, social justice, and multistage) to study your research problem. In this chapter, the advantages of each design are specified.
- Of the designs, recognize that it is easier to conduct an explanatory sequential or exploratory sequential design than a convergent design. With a convergent design, you need to merge both quantitative and qualitative databases (e.g., numbers and text) and explain possible divergence when it exists between the databases.
- Recognize that in selecting a mixed methods design, you have taken on a challenging project. Mixed methods research involves extensive data collection and data analysis. Weigh the trade-off between drawbacks of time and resources and the advantages of collecting both quantitative and qualitative data to understand your research problem.
- Consider the overriding intent of your mixed methods study. Do this before considering priority and sequence of the study.
- To best present the procedures in your mixed methods design, create a diagram that portrays the steps in the process.

Additional Resources You Might Examine

There are many excellent journal articles and book chapters available on mixed methods research, but in recent years many books on the subject have appeared in print.

Creswell, J. W. (2013). *Research design: Quantitative, qualitative, and mixed method approaches* (4th ed.). Thousand Oaks, CA: SAGE.

Creswell, J.W. (2014). *A concise introduction to mixed methods research.* Los Angeles: SAGE.

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Thousand Oaks, CA: SAGE.

Greene, J. C. (2007). *Mixed methods in social inquiry.* San Francisco: John Wiley & Sons.

Morse, J. M., & Niehaus, L. (2009). *Mixed method design: Principles and procedures.* Walnut Creek, CA: Left Coast Press.

Plano Clark, V. L., & Creswell, J. W. (2008). *The mixed methods reader.* Thousand Oaks, CA: SAGE.

Tashakkori, A., & Teddlie, C. (Eds.). (2011). *Handbook of mixed methods in social and behavioral research* (2nd ed.). Thousand Oaks, CA: SAGE.

Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences.* Thousand Oaks, CA: SAGE.

17

Action Research Designs

Of all of the research designs, action research is the most applied, practical design. Action researchers explore a practical problem with an aim toward developing a solution to a problem. This chapter defines action research, identifies when you use it, assesses the key characteristics of it, and advances the steps in conducting and evaluating this design.

By the end of this chapter, you should be able to:

- Define action research and describe when to use it and how it developed.
- Identify the types of action research designs.
- Describe the key characteristics of action research.
- Anticipate potential ethical issues in action research.
- Identify the steps in conducting an action research study.
- List the criteria for evaluating an action research report.

Maria chooses to conduct an action research study. Her school committee especially likes this approach because Maria will develop a practical solution to the problem of students carrying weapons in school. She asks this research question "What steps can our school take to encourage students to be more concerned about the possession of weapons in the school?" Maria collects information from her students by asking them to complete a brief questionnaire (quantitative data) and to maintain a journal (qualitative data) for a couple of months about their experiences with other students who carry weapons to school. Maria also holds conversations with fellow teachers and obtains their reaction to the problem. From these data, Maria compiles a list of possible solutions and rank-orders them based on how individuals rated them. She presents this list to her school committee, and they choose which solutions they can realistically implement. Maria has conducted an action research study.

WHAT IS ACTION RESEARCH, WHEN DO YOU USE IT, AND HOW DID IT DEVELOP?

Action research has an applied focus. Similar to mixed methods research, action research uses data collection based on either quantitative or qualitative methods or both. However, it differs in that action research addresses a specific, practical issue and seeks to obtain solutions to a problem. Thus, **action research designs** are systematic procedures completed by individuals in an educational setting to gather information about and subsequently improve the ways in which their particular educational setting operates, how they teach, and how well their students learn (Mills, 2018). Educators aim to improve the practice of education by studying issues or problems they face. Educators reflect about these problems, collect and analyze data, and implement changes based on their findings. In some cases, researchers address a local, practical problem, such as a classroom issue for a teacher, behavioral management, or leadership issues in an educational institution. In other situations, researchers seek to empower, transform, and emancipate individuals from situations that constrain their self-development and self-determination.

When Do You Use Action Research?

You use action research when you have a specific educational problem to solve. This problem may be assessing the difficulties faced by part-time faculty (Watters, Christensen, Arcodia, Ryan, & Weeks, 1998), ascertaining whether problem-based learning is superior to a traditional lecture (Dods, 1997), or discovering how literacy in writing emerges for first-grade students (Ceprano & Garan, 1998). Action research provides an opportunity for educators to reflect on their own practices. Within the scope of a school, action research offers a means for staff development, for teachers' development as professionals, and for addressing schoolwide problems (Allen & Calhoun, 1998). In fact, the scope of action research provides a means for teachers or educators in the schools to improve their practices of taking *action* and to do so by participating in research.

Action research also applies to the vast array of educational problems that individuals encounter outside of schools. Researchers often partner with stakeholders to collaboratively conduct action research around issues affecting communities. Ivankova (2015) broadly defines community as including educational institutions, private organizations, nongovernmental organizations, neighborhoods and regions, or a community of individuals with common interests. For example, a community might be children with autism and their parents in a certain city. Or, it might involve defining a community of learners to understand assessment practices (Harnisch, Creswell, & Guetterman, 2018) Thus, action research is a way to conduct research with (as opposed to "on") a community to address practical issues and take action.

How Did Action Research Develop?

Three stages marked the development of action research. The first stage consisted of the identification of a process for addressing societal issues. The second stage turned toward practice and the need to involve practitioners, such as teachers, in the solution to their own problems. The third and most recent phase represented the participatory, emancipatory, or community action research approach in which groups assume responsibility for their own emancipation and change.

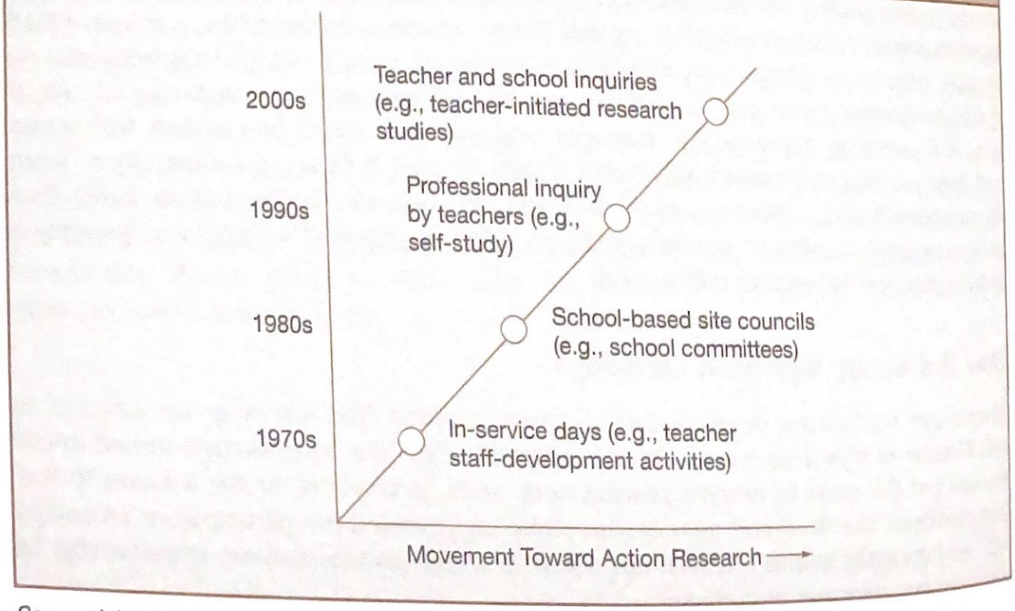
The social-psychologist Kurt Lewin coined the term "action research" in the 1930s (Mills, 2011). Lewin believed that social conditions in the 1940s—such as the shortage of meat, the need for aerial reconnaissance during World War II, and the improvement of intercultural group relations after the war—might be enhanced through the process of group discussions (Kemmis, 1994). These group processes consisted of four steps: planning, acting, observing, and reflecting. By focusing on group processes and identifying phases of action, Lewin's approach introduced many of the modern ideas of action research: a process of steps, participation, the democratic impulse of involvement, and the contribution to social change (Kemmis, 1994). Spreading from the social sector to education, Lewin's ideas were adopted at the Horace-Mann-Lincoln Institute at Teachers College, Columbia University, and in England at the Tavistock Institute.

This spread of action research slowed during the mid- to late 1950s. The growing gulf between theory and practice, the emphasis on research development in regional educational laboratories, and the use of experiments and systematic research all contributed to this decline. Then, in the 1970s, action research projects in Great Britain, the United States, and Australia re-emerged. For example, the Fort Teaching project in England focused on teachers studying their own practices. The Classroom Action Research Network at the Cambridge Institute of Education in Great Britain addressed practical issues between teachers and students. Team-based inquiry between researchers and the schools emerged at Columbia University in the United States. The emancipation of individuals in education based on the German writings of Habermas became the focus of inquiry by the Australian Stephen Kemmis and his colleague (Kemmis & McTaggart, 2005).

Having teachers study their own classroom problems and issues has emerged as an important direction for school renewal today. As shown in Figure 17.1, the movement toward action research has evolved from the in-service days of the 1970s to the site-based plans for staff development during the 1980s, to the present emphasis on

FIGURE 17.1

Evolution of Action Research for Teachers and Schools



Source: Adapted from Schmuck (1997).

educators reflecting on their own practices (Schmuck, 1997). Reasons cited today for the importance of action research reinforce these trends. Action research does the following:

- Encourages change in the schools
- Fosters a democratic approach to education (i.e., the involvement of many individuals)
- Empowers individuals through collaboration on projects
- Positions teachers and other educators as learners who seek to narrow the gap between practice and their vision of education
- Encourages educators to reflect on their practices
- Promotes a process of testing new ideas (Mills, 2018)

Although action research has gained support in education, it is not without critics, who are reluctant to view it as a legitimate form of inquiry (Stringer, 2007). Some view it as an informal process of research, conducted by teachers and other educators who are not formal academic researchers. The practical aspect of action research also suggests an applied orientation to this form of inquiry with a less-than-scientific approach. Action researchers typically report results of their studies through websites, social media, local school groups, and scholarly journals in education. The methods are adapted and changed in response to the practitioners' objectives to understand a practical problem. Hence, the design may not have the rigor and systematic approach found in other designs.

Despite these concerns, action research fulfills an important role for the professional–researcher and school-based teams formed to study local school issues. It also provides a design that encourages collaboration among school and community participants and researchers to help transform schools and educational practices.

MyLab Education Self-Check 17.1

MyLab Education Application Exercise 17.1: Understanding Concepts: Purpose Statements, Research Questions, and Hypotheses

WHAT ARE THE TYPES OF ACTION RESEARCH DESIGNS?

Action research means different things to different people. A review of the major writers in education, however, shows that the following two basic research designs are typically discussed (Mills, 2018):

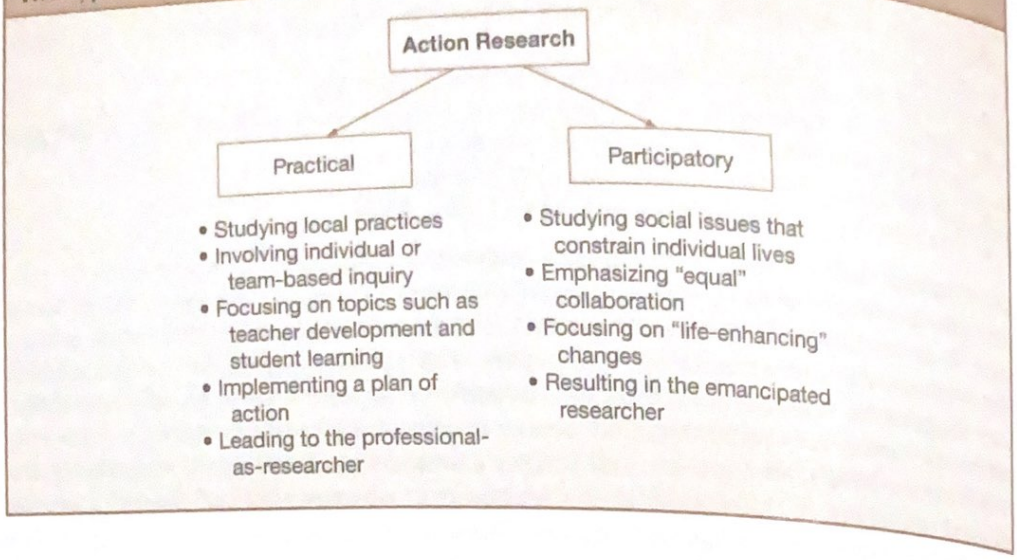
- Practical action research
- Participatory action research

As you read about these two forms of action research, the overview of their differences shown in Figure 17.2 will help you distinguish between their major features.

Practical Action Research

Educational professionals seek to research problems in their own workplaces so that they can improve their students', clients', or staff outcomes and their own professional performance. Teams composed of teachers, students, counselors, and administrators engage in action research to address common issues, such as escalating violence in schools. In these situations, educators seek to enhance the practice of education through the systematic study of a local problem. This form of action research is called

FIGURE 17.2
Two Types of Action Research Designs



practical action research, and its purpose is to research a specific situation, such as in a school, with a view toward improving practice (Schmuck, 1997). Practical action research involves a small-scale research project, narrowly focuses on a specific problem or issue, and is undertaken by individual education professionals or teams within a school or school district. Examples of practical action research studies include the following:

- An elementary teacher studies the disruptive behavior of a child in her classroom.
- A team composed of students, teachers, and parents studies the results of implementing a new math program in the local junior high.
- A community college instructor studies his professional development using technology in teaching.

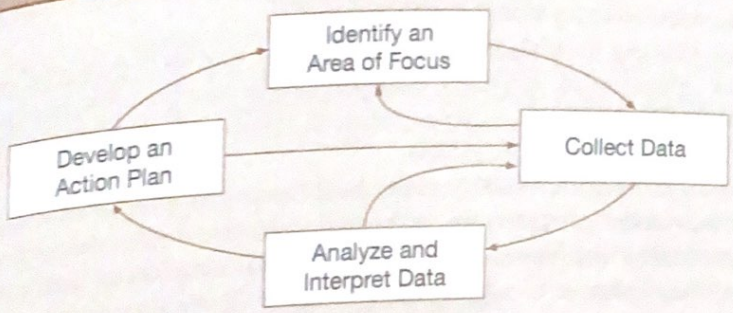
In all these examples, action research seeks to improve specific, local issues. It calls for educators to involve teachers in research to study concerns in their own schools or classrooms and to implement site-based councils or committees in schools to enhance research as an integral part of daily classes and education. In this spirit, educators can test their own theories and explanations about learning, examine the effects of their practices on students, and explore the impact of approaches on parents, colleagues, and administrators within their schools.

A drawback of this approach is that although teachers seek to improve their classroom practices, they have little time to engage in their own research. Although teachers may be good at what they do and familiar with teaching kids in classes, they may need assistance in becoming researchers. To this end, they can participate in graduate classes, which will help them renew or develop the requisite skills for inquiry required in an action research project.

To understand practical action research, we need to review its major ideas or principles. As identified by Mills (2018), the following principles focus on assumptions about the role of teachers as learners, as reflective practitioners, and as individuals engaging in small-scale research projects:

- Teacher–researchers have decision-making authority to study an educational practice as part of their own ongoing professional development.

FIGURE 17.3
Mills's (2011) Dialectic Action Research Spiral



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- Teacher–researchers are committed to continued professional development and school improvement, a core assumption for any teacher who decides to engage in action research.
- Teacher–researchers want to reflect on their practices. They reflect so that they can improve their practices. They do this individually or in school-based teams composed of students, teachers, and administrators.
- Teacher–researchers use a systematic approach for reflecting on their practices, meaning that they use identifiable procedures to study their own problems rather than using a random, anything-goes design.
- Teacher–researchers will choose an area of focus, determine data collection techniques, analyze and interpret data, and develop action plans.

This final point refers to the process of research. The books about practical action research advance detailed steps that teachers and other educators might use to conduct a study. Mills (2018), for example, discusses several of these models and then advances his own and uses it as the framework for chapters in his book. He calls his model the *dialectic action research spiral*. This model, shown in Figure 17.3, provides action researchers with a four-step guide for their action research project. Mills emphasizes that it is a model for teachers to use to study themselves, not a process of conducting research *on* teachers. It is a "spiral" because it includes four stages where investigators cycle back and forth among data collection, their focus, analysis, and interpretation.

In this procedure, the action researcher identifies an area of focus. This process involves defining this area, doing reconnaissance (self-reflection and description), reviewing the literature, and writing an action research plan to guide the research. Then the action researcher collects data by gathering multiple sources of data (quantitative and qualitative) and by using a variety of inquiry tools, such as interviews, questionnaires, or attitude scales. Data collection also consists of attending to issues of validity, reliability, and ethics, such as provisions for informed consent from participants.

The action researcher follows this phase with analysis and interpretation. The process includes identifying themes; coding surveys, interviews, and questionnaires; asking key questions; doing an organizational review; engaging in concept mapping (i.e., visualizing the relationship of ideas); analyzing antecedents and consequences; and displaying findings. Interpretation involves extending the analysis by raising questions, connecting findings to personal experiences, seeking the advice of critical friends, and contextualizing the findings in literature and theory.

In the final stage, the action researcher finally completes an action plan. This plan includes a summary of findings, recommended actions, and the identification of individuals responsible for action and those who need to be consulted and informed. The plan also indicates who will monitor and collect the data, the timeline for data collection, and the resources needed to carry out the action.

Overall, this process emphasizes practical action research centered around studying a local problem, engaging in inquiry by an individual teacher (teacher as researcher) or a team, and focusing on teacher development. A review of an actual study can illustrate this practical approach to action research.

Sarraj, Bene, Li, and Burley (2015) described the development and implementation of a multicultural education program for fifth-grade students. After setting up the need for multicultural education, the literature on multicultural education, and curriculum development efforts, they discussed a program aimed at developing knowledge and awareness of attitudes and beliefs of other cultures. Sarraj et al. (2015) followed a five-step action research process:

1. Identify the topic of multicultural education.
2. Develop a multicultural program.
3. Conduct a two-week implementation study.
4. Gather and analyze data.
5. Conduct a reflection to include implications and recommendations.

The study illustrated a process of action research from identifying a focus on multicultural education through the development of practical recommendations. Based on their analysis, they provided recommendations for multicultural education: to incorporate technology and multimedia, to expose students to cultural differences, and to develop students' awareness of bullying behavior.

Participatory Action Research

Participatory action research (PAR) has a long history in social inquiry involving communities, industries and corporations, and other organizations outside of education (e.g., Kemmis & McTaggart, 2005). Rather than focus on individual teachers solving immediate classroom problems or schools addressing internal issues, PAR has a social and community orientation and an emphasis on research that contributes to emancipation or change in our society. Drawing on the work of the Brazilian Paulo Freire, the German critical theorist Jurgen Habermas, and more recently Australians Stephen Kemmis and Ernest Stringer, this approach has emerged as an action-oriented, advocacy means of inquiry. Often, PAR includes qualitative data collection, but it may also involve quantitative data collection.

Individuals refer to PAR by different names, such as *participatory research, critical action research*, or *classroom action research* (Kemmis & McTaggart, 2005). To acknowledge the collaborative nature of this type of inquiry, this chapter uses the term *participatory action research* (Ivankova, 2015).

The purpose of **participatory action research** is to improve the quality of people's organizations, communities, and family lives (Stringer, 2007). Although espousing many of the ideas of teacher and school-based practical action research, it differs by incorporating an emancipatory aim of improving and empowering individuals and organizations in education (and other) settings. Applied to education, the focus is on improving and empowering individuals in schools, systems of education, and school communities. PAR also has a distinct ideological foundation that shapes the direction of the process of inquiry; the type of issue that commands attention of the action researcher; the procedures of research, especially data collection; and the intent and outcomes of the inquiry.

For example, participatory action researchers study issues that relate to a need to address social problems that constrain and repress the lives of students and educators. For example, consider these issues that address social, economic, political, and class problems in our society that may be the focus of a PAR study:

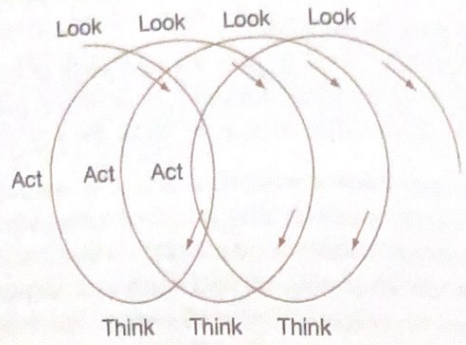
- Tests that label and stereotype students
- Texts that omit important historical persons or events of cultural and ethnic groups
- Assessments that serve to confirm student failure rather than learning
- K–12 classroom interactions that silence or quiet the voices of minority students

In addition to studying these sensitive issues, the participatory action researcher also engages in a process of research that promotes egalitarian and democratic aims. Participatory action researchers strive for an open, broad-based involvement of participants in their studies by collaborating in decisions as consensual partners and engaging participants as equals to ensure their well-being. For example, in their inquiries, researchers emphasize the importance of establishing contacts, identifying stakeholder groups, locating key people, negotiating the researcher's role, and building a preliminary picture of the field context of the study (Stringer, 2007). The social values of liberation and life-enhancing changes are also important, and action researchers seek to bring about a new vision for schools, community agencies, youth clubs, and ethnic groups within schools.

Kemmis and McTaggart (2005) summarized six central features of PAR:

1. *PAR is a social process in which the researcher deliberately explores the relationship between the individual and other people.* The objective is to understand how social interaction forms and re-forms individuals. Applied to education, participatory action researchers might explore teachers working together in teams.
2. *This form of inquiry is participatory.* This means that individuals conduct studies *on* themselves. During this process, people examine how their own understandings, skills, values, and present knowledge both frame and constrain their actions. Teachers, for example, would study themselves to gain a better understanding of their practices and how this knowledge shapes (and constrains) their work with students.
3. *This form of research is practical and collaborative.* It is collaborative because it is inquiry completed *with* others. It is practical because researchers typically explore acts of communication, the production of knowledge, and the structure of social organization to reduce irrational, unproductive, unjust, or unsatisfying interactions. Teachers, for example, might collaborate with other teachers to reduce the levels of bureaucracy in a school that might inhibit classroom innovations.
4. *PAR is emancipatory in that it helps unshackle people from the constraints of irrational and unjust structures that limit self-development and self-determination.* The intent of a study, for example, might be to change the bureaucratic procedures for teachers in schools so that they can better facilitate student learning.
5. *PAR is critical in that it aims to help people recover and release themselves from the constraints embedded in social media (e.g., their language, their modes of work, and their social relationships of power).* For example, teachers may be constrained by a subservient role in the school district so that they do not feel empowered in their classrooms.
6. *PAR is reflexive (e.g., recursive or dialectical) and focused on bringing about change in practices.* This occurs through spirals of reflection and action. When teachers reflect on their roles in schools, they will try one action and then another, always returning to the central question of what they learned and accomplished because of their actions.

FIGURE 17.4
Stringer's (2007) Action Research Interacting Spiral



Source: Stringer (2007, p. 9). Reprinted by permission of SAGE Publications, Inc.

A spiral of looking, thinking, and action best reflects the action research process. This process, called the interacting spiral by Stringer (2007), is shown in Figure 17.4. This model contains three phases: look, think, and act. The spiral of this model conveys that action research is not neat, orderly, and linear but rather is a process of repeating and revising procedures and interpretations.

Let us examine more closely the components of the action research process for looking, thinking, and acting. A detailed analysis of the three phases is shown in Figure 17.5. In this model, Stringer (2007) placed emphasis on the importance of "looking" to build a picture to help stakeholders understand the issues they are experiencing. The "look" phase consists of collecting data (e.g., through interviews, observation, and documents),

FIGURE 17.5
Steps in Stringer's (2007) Action Research Model

Look: Building the Picture	Think: Interpreting and Analyzing	Act: Resolving Problems
Purpose: To assist stakeholding groups in building a picture	Purpose: To distill the information gathered, identify elements of people's experiences, and enable the participants to understand the way the issue affects their lives and activities	Purpose: To plan and implement practical solutions to problems
Process: Gather information Record information Extend understanding Organizing meetings Communicating	Process: Frameworks Categorizing and coding Analyzing key experiences Enriching analysis using frameworks Writing reports collaboratively Presentations and performance	Process: Planning Implementing Reviewing Evaluating

Source: Adapted from Stringer (2007, pp. 63, 124, 144). Permission conveyed through Copyright Clearance Center, Inc.

recording and analyzing the information, and constructing and reporting to stakeholders about the issue. The "think" phase then moves into interpreting the issues in greater depth and identifying priorities for action. In the final phase, the researcher identifies the "act" phase: devising practical solutions to the problems. This involves creating a plan, setting direction, and identifying objectives and tasks. In the act phase, researchers must also find persons to carry out the objectives and secure needed resources. It additionally means implementing the plan, encouraging people to carry it out, and evaluating it in terms of its effect and achievements.

Let us examine a PAR study to see this process at work. Stanulis and Jeffers (1995) studied the mentoring relationship among a fifth-grade classroom teacher (Lynn), her student teacher (Shawna), and a university coordinator (Randi). Called critical action research, the authors described Lynn's mentoring of Shawna. Randi, as the coordinator of field experiences and a university mentor, worked with Lynn to compile data to assess the mentoring of her student teacher. They collected three sets of data to explore this mentoring:

- Five video-recorded conferences were recorded between the student and the classroom teachers every other week during a 10-week period.
- Weekly personal journal entries of the classroom teacher and the student teacher were reviewed.
- The university coordinator conducted five interviews with the classroom and the student teachers using the method of individual stimulated recall, a procedure of viewing the video recordings and answering interview questions (e.g., "Was there a point in the conference that you chose not to say something?").

Based on these data, the university coordinator and the classroom teacher identified four themes: (a) the process in which the student teacher gained the students' respect; (b) how the student teacher learned about the children as a learning community (e.g., their family backgrounds and interests); (c) the mentoring relationship between the student teacher and the classroom teacher; and (d) ideas learned from action research.

Consistent with PAR, the authors mentioned that the student teacher brought to the classroom issues of knowledge and authority. The mentoring teacher viewed authority, embedded within the structure of the student-teaching experience, as shifting and changing during the course of the experience. The mentoring began as a springboard from which the teacher shared how to teach the children and shifted to the mentor teacher serving as someone who listened to and helped clarify students' ideas. The semester ended with the student teacher and mentor teacher viewing each other as colleagues, sharing ideas, and, in the process, loosening the constraints of teacher authority lodged within a student-teaching experience. They changed and transformed the mentoring relationship during this work together—a result consistent with PAR. In addition, in the student teacher–teacher conferences, the opportunity to reflect on each individual's approach to teaching provided collaboration and reflection before action. Individuals learned about themselves and became sensitive to changes in the teacher–student relationship.

As you think back on Maria's action research project where she addresses the question "What steps can our school take to encourage students to be more concerned about the possession of weapons in the school?," should she use practical action research or participatory action research as her action research approach? Provide three reasons for your choice.

MyLab Education Self-Check 17.2

MyLab Education Application Exercise 17.2: Thinking Like a Researcher: Applying an Action Research Design

WHAT ARE THE KEY CHARACTERISTICS OF ACTION RESEARCH?

Despite differences between practical action research and PAR, both types of designs have common characteristics found in action research. Understanding these characteristics will help you better design your own study or read, evaluate, and use an action research study published in the literature. These characteristics are the following:

- A practical focus
- The educator–researcher's own practices
- Collaboration
- A dynamic process
- A plan of action
- Sharing research

A Practical Focus

The aim of action research is to address an actual problem in an educational setting. Thus, action researchers study **practical issues** that will have immediate benefits for education. These issues may be the concern of a single teacher in a classroom or a problem involving many educators in a building. It may be a school–community issue, an issue with a school policy or structure that constrains individual freedom and action, or a concern of individuals in towns and cities. Action researchers undertake this form of research not to advance knowledge for knowledge's sake but rather to solve an immediate, applied problem.

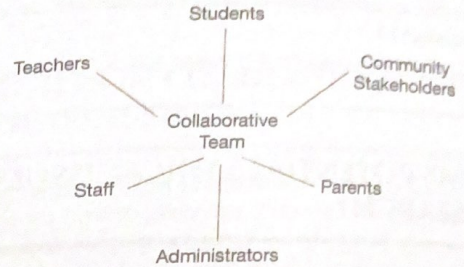
The Educator–Researcher's Own Practices

When action researchers engage in a study, they are interested in examining their own practices rather than studying someone else's practices. In this sense, action researchers engage in **participatory** or **self-reflective research** in which they turn the lens on their own educational classroom, school, or practices. As they study their own situation, they reflect on what they have learned—a form of self-development—as well as what they can do to improve their educational practices. Action researchers deliberately experiment with their own practices, monitor the actions and circumstances in which they occur, and then retrospectively reconstruct an interpretation of the action as a basis for future action. In this reflection, action researchers weigh different solutions to their problems and learn from testing ideas. Action research has been called "a spiral of self-reflection" (Kemmis, 1994, p. 46).

Collaboration

Action researchers **collaborate with others**, often involving co-participants in the research (Schmuck, 2009). These co-participants may be individuals within a school or outside personnel, such as university researchers or professional association groups. This does not mean that outsiders should co-opt practitioners by gathering data that serve only their needs. So that this co-opting will not occur, outsiders need to negotiate their entry to a site with participants and be sensitive to the involvement of participants in the project (Stringer, 2007). It involves establishing acceptable and cooperative relationships, communicating in a manner that is sincere and appropriate, and including all individuals, groups, and issues. As shown in Figure 17.6, many individuals and groups may participate in an action research project. Individuals may review the results of findings with the researcher, help collect data, or assist in the presentation of the final report. Many aspects of the research process are

FIGURE 17.6
Collaborative Teams in Action Research



open to collaboration in action research. During this collaboration, roles may vary and may be negotiated, but the concept of interacting is central to understanding one's practices.

A Dynamic Process

Action researchers engage in a **dynamic process** involving iterations of activities, such as a "spiral" of activities. The key idea is that the researcher "spirals" back and forth between reflection about a problem, data collection, and action. A school-based team, for example, may try several actions after reflecting on the best time for high school classes to begin. Reflecting, collecting data, trying a solution, and spiraling back to reflection are all part of the process of action research. The process does not follow a linear pattern or a causal sequence from problem to action.

A Plan of Action

The next step is to identify a **plan of action**. At some point in the process, the action researcher formulates an action plan in response to the problem. This plan may involve simply presenting the data to important stakeholders, establishing a pilot program, starting several competing programs, or implementing an ongoing research agenda to explore new practices (Stringer, 2007). It may be a formal written plan or an informal discussion about how to proceed, and it may engage a few individuals (e.g., students in a classroom) or involve an entire community (e.g., in a participatory research study).

Sharing Research

Unlike traditional research that investigators report in journal and book publications, action researchers report their research to educators who can then immediately use the results. Action researchers often engage in **sharing reports** with local school, community, and educational personnel. Although action researchers sometimes publish in scholarly journals, they are typically more interested in sharing the information locally with individuals who can promote change or enact plans within their classroom or building. Action researchers share results with teachers, the building principal, school district personnel, and parent associations (e.g., Hughes, 1999). In addition, online journals (both with and without standards for inclusion), websites, and discussion blogs provide opportunities for action researchers to publicize their studies (see Mills, 2018). Innovative

forums also exist for performance texts in which the researchers perform what they have learned through action research (see Denzin, 1997). These performances might be a play, a poem, a reading of text, slides, or music.

MyLab Education Self-Check 17.3

MyLab Education Application Exercise 17.3: Thinking Like a Researcher: Designing an Action Research Study

WHAT ARE SOME POTENTIAL ETHICAL ISSUES IN ACTION RESEARCH?

Collaborating with participants, a central feature of action research, may lead to ethical issues. The close relationship between the researcher and participants means that data collection cannot be coercive. It should also acknowledge the dual role of the teacher and the researcher and the sensitivity it takes to engage in this form of research. It also means that students or participants (such as in one's own classroom) can opt out of a study if they so desire without being penalized. These are special ethical concerns that arise in action research. Following in a similar manner, Brydon-Miller (2009) wrote about ethics and action research and advocated that researchers should adopt "covenantal ethics" established on the basis of caring relationships among community research partners and a shared commitment to social justice. This commitment entails open and transparent participation, respect for people's knowledge, democratic and nonhierarchical practices, and positive and sustainable social change among the action research community. Thus, the research needs to be in the best interest of those facing the problem or issue being addressed in the action research project. Some of the ethical needs in collaborating with community participants are to continually renegotiate the purpose of the study, to consider how the results will be used, and to involve participants in as many phases of the process of research as possible. In addition, as "Ethical Dilemma: When the Consent Form May Mislead Participants" indicates, the initiation of the process through the consent process form may present an ethical problem.

Ethical Dilemma

When the Consent Form May Mislead Participants

Newkirk (1996) has written about one ethical challenge in conducting action research. He focused his attention on the use of the consent form completed by participants before the study begins. He referred to this form as an "act of seduction." The consent form, he maintained, may aid the researcher by providing an all-too-brief and vague description of the project and convey an impression of the solicitousness of the researcher. The form also heightens the sense of importance of the study and encourages the participants to divulge deeply felt beliefs and cherished experiences. Newkirk goes on to make important recommendations in regard to these ethical issues. He says that the consent process should acknowledge the potential for negative interpretations made during the study and that participants should have a role in making interpretations of the study results. Could you provide several suggestions about practical steps a researcher might take when using the consent form in action research in order to address these ethical issues?

MyLab Education Self-Check 17.4

MyLab Education Application Exercise 17.4: Thinking Like a Researcher: Ethics and Action Research

WHAT ARE THE STEPS IN CONDUCTING AN ACTION RESEARCH STUDY?

In the steps that follow, remember that action research is a dynamic, flexible process and that no blueprint exists for how to proceed. However, several steps in the process can illustrate a general approach for your use.

Step 1. Determine If Action Research Is the Best Design to Use

Action research is an applied form of inquiry and is useful in many situations. You might use it to address a problem, typically one in your work situation or community. It requires that you have the time to collect and analyze data and to experiment with different options for solving the problem. To help with the process of reflection, you ideally need collaborators with whom to share findings and who can potentially serve as co-researchers on the project. Action research also requires a broad understanding of the many types of quantitative and qualitative data collection to gather information to devise a plan of action.

Step 2. Identify a Problem to Study

The most important factor in action research is that you need to solve a practical problem. This problem may be one that you face in your own practice or in your community (Kemmis & Wilkinson, 1998). After reflection, you write down the problem or phrase it as a question to answer.

The research problem is only one place that you might begin your study. In addition to starting with solving a problem, you might enter action research at other points (Schmuck, 1997). Action researchers may begin with identifying an area of focus, collecting data, analyzing and interpreting data, or developing an action plan (Mills, 2011).

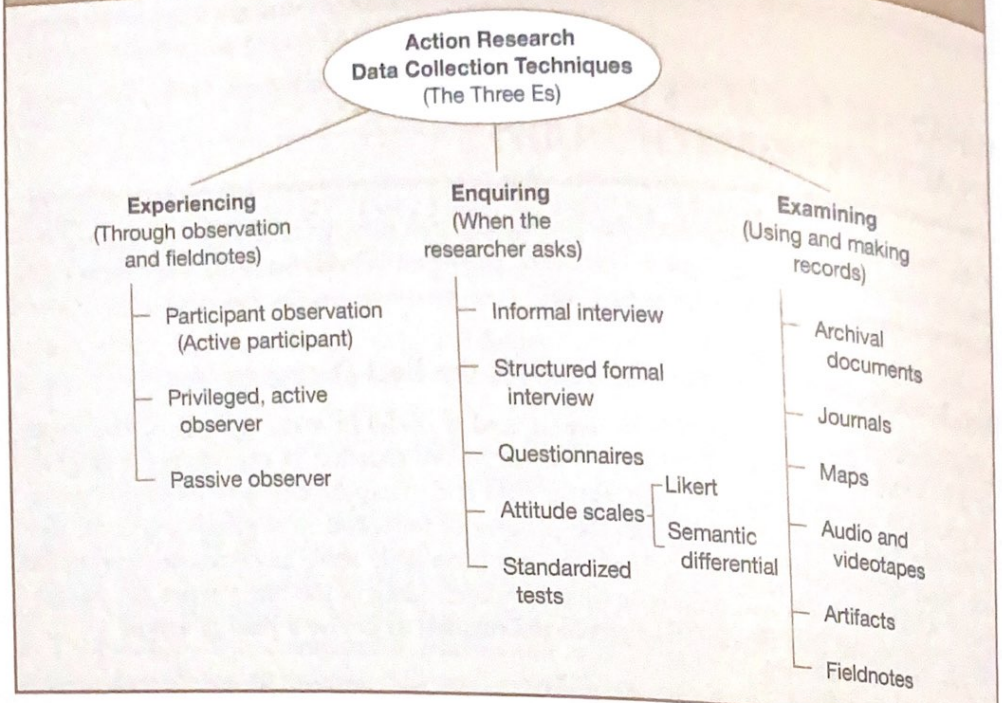
Step 3. Locate Resources to Help Address the Problem

Explore several resources to help study the problem. Literature and existing data may help you formulate a plan of action. You may need to review the literature and determine what others have learned about solving the issue. Asking colleagues for advice helps initiate a study. Teaming with university personnel or knowledgeable people in the community provides a resource base for an action research project. Individuals who have conducted action research projects can also help you during your research study.

Step 4. Identify Information You Will Need

Plan a strategy for gathering data. This means that you need to decide who can provide data, how many people you will study, what individuals to access, and the rapport and support you can expect to obtain from them. You may need to file a proposal for data collection with the institutional review board if you plan to use the research for your graduate research project.

FIGURE 17.7
A Taxonomy of Action Research Data Collection Techniques



Source: Reprinted by permission of Pearson Education/Allyn & Bacon.

Another consideration is what type of data you need to collect. Your choices are to collect quantitative or qualitative data, or both. It is helpful to understand the possibilities that exist for both forms of data. Mills (2018), for example, organized quantitative and qualitative sources, as shown in Figure 17.7, into three dimensions:

- *Experiencing.* Observing and taking field notes
- *Enquiring.* Asking people for information
- *Examining.* Using and making records

The choice of data sources depends on the questions, time and resources, availability of individuals, and sources of information. In general, the more sources used and the more triangulation among them, the more you will be able to understand the problem and develop viable action plans (Sagor, 2005). It is probably wise to limit data collection in your first action research study so that you have a manageable amount of information to analyze.

Step 5. Implement the Data Collection

Implementing data collection takes time, especially if you gather multiple sources of information. In addition, your participants may have limited time to complete instruments or engage in interviews. Keeping an accurate record of the information collected, organizing it into data files for numeric or theme analysis, and examining the quality of the information are important data collection steps.

Step 6. Analyze the Data

You may decide to analyze the data yourself or enlist the help of other educators or data analysts. You might show your results to others to find out how they would interpret the findings. In most situations, descriptive statistics will suffice for your action research data analysis, although you may want to compare some group data or relate several variables. The major idea is to keep the data analysis manageable so that you can identify useful information in formulating a plan of action.

Step 7. Develop a Plan for Action

A plan may be an informal statement about the implementation of a new educational practice. It might be a plan to reflect on alternative approaches to addressing the problem or to share what you have learned with others, such as teachers, individuals in district offices, or other schools and communities. You might formally write out this plan or present it as an outline. You can develop it yourself or collaborate with school personnel in writing it. The important point is that you now have a strategy for trying out some ideas to help solve your problem.

Step 8. Implement the Plan and Reflect

In many action research projects, you will implement your plan of action to see if it makes a difference. This involves trying out a potential solution to your problem and monitoring whether it has an impact. To determine this difference, you might consult your original objectives or the research question that you sought to answer in the action research project.

You also need to reflect on what you have learned from implementing your plan and sharing it with others. You may need to share it broadly with school colleagues, school committees, university researchers, or policymakers. In some cases, you will not achieve an adequate solution, and you will need to try out another idea and see if it makes a difference. In this way, one action research project often leads to another.

MyLab Education Self-Check 17.5

MyLab Education Application Exercise 17.5: Reading Research: An Action Research Study

HOW DO YOU EVALUATE AN ACTION RESEARCH STUDY?

To evaluate an action research study, consider using the criteria in Table 17.1 to assess its quality. These criteria are applicable to both practical action research and PAR (see Kemmis & Wilkinson, 1998; Mills, 2018).

MyLab Education Self-Check 17.6

MyLab Education Application Exercise 17.6: Reading Research: Evaluating an Action Research Study

TABLE 17.1
Evaluating the Quality of an Action Research Study

Quality Criteria	Indicators of Higher Quality	Indicators of Lower Quality
The Key Elements		
The action researcher focuses on a practical problem or issue in the community.	The researcher clearly identifies the problem or issue leading to a need for the study.	The researcher does not articulate the issue or problem, leading the reader to wonder why the study was undertaken.
The action research study includes multiple sources of quantitative and qualitative data.	The researcher gathers both quantitative and qualitative data and thus includes multiple sources of information in studying the problem or issue.	The researcher gathers only quantitative data or only collects qualitative data and does not use the full potential of responses that both quantitative and qualitative data will provide.
The researcher engages in collaboration with the participants in the study.	The researcher involves the participants in identifying the problem, collecting the data, and advancing the plan for action.	The researcher is the sole problem solver in the study and does not involve the stakeholders or community members in the project.
In the end, the action research report advances a plan for action to address the problem or community need.	The researcher advances at the end of the study a distinct plan of action for addressing the problem or the issue.	The researcher does not present a plan for action at the end of the study but does provide more general recommendations for change.
The action researcher grows professionally as a result of conducting the study.	The researcher's presence is known in the study and reflects on his or her own understanding of the problem or issue and how he or she has grown to understand this problem and issue over time during the study.	The researcher's presence is largely absent in the study, and we do not know how he or she viewed the problem or issue or how it might have impacted that individual's life.
The action researcher reports the research in a way acceptable to stakeholders and community audiences.	The researcher clearly presents the action research report in a way that is acceptable to practical stakeholders, such as a one-page overview with bulleted points and general summaries.	The researcher presents the study in a formal research report, complete with detailed methods that may not be easily understood by important stakeholders involved in the study.

KEY IDEAS IN THE CHAPTER

Definition of Action Research, Its Use, and Its Development

The purpose of action research is to improve the practice of education, with researchers studying their own problems or issues in a school or educational setting. Educators engage in reflection about these problems, collect and analyze data, and implement changes or a plan of action based on their findings. In some cases, the research solves a local, practical problem, such as a classroom issue for a teacher. In other situations, the research seeks ideological aims, such as to empower, transform, and emancipate individuals and communities.

Action research developed in the 1930s with citizen group processes. After a short time, it resurfaced in the 1970s with projects in Great Britain, the United States, and Australia. These projects focused on teachers studying their own practices, educators working with schools, and researchers helping individuals emancipate themselves from social issues in educational settings. Today, action research has grown in importance as a means for enhancing school renewal, promoting teacher development, and testing new ideas.

Types of Action Research Designs

Action research is an informal process of research in which educators engage in a study of their own practices. Individual teachers, teams within a school or district, or school-community inquiry groups undertake this form of research. Two types of action research designs exist. The first design, practical action research, is an approach that involves educators examining a school situation with a view toward improving practice. Rather than a focus on individual teachers solving immediate classroom problems or schools addressing internal issues, the second design, PAR (or critical action research), has a social and community orientation and places emphasis on research that contributes to emancipation or change in our society. The PAR approach seeks to improve the quality of organizations, community, and family lives. It espouses an objective of improving and empowering individuals and organizations in educational settings. Both the practical and the participatory forms of action research have basic principles and models for conducting research.

Key Characteristics of Action Research

Action researchers use a process of inquiry regardless of design. The teacher or educator becomes the researcher. As the researcher, the practitioner becomes self-reflective about the process. Action researchers often engage others collaboratively in the process as co-participants and enact a dynamic model of inquiry involving iterations of activities, cycling back and forth between identifying a problem, trying a solution, reflecting on information learned, and applying new solutions. During this process, they implement a plan of action to guide the use of a new practice. They base this plan on what they learned about the research problem, and they share it with others, such as in informal reports to colleagues, school officials, school boards, and community members.

Potential Ethical Issues in Action Research

Ethical issues are central to conducting action research that involves participants in a substantial way. The action researcher needs to conduct the inquiry in a way that respects the care of the participants, involves them collaboratively in all phases of the research, and is sensitive to obtaining consent and advancing the purpose of the study when all the phases may not be initially known. It is also important for participants to have the option to withdraw from the study.

Steps in Conducting an Action Research Study

Action researchers begin with a practical problem that they face or someone in a community might face. They help locate resources and information to address the problem, and they engage in data collection that might involve both quantitative and qualitative forms of data. They analyze the data, often done collaboratively with participants, and develop and implement a plan of action.

Evaluating an Action Research Study

Evaluation of an action research study is based on assessing whether it addresses a practical issue, involves the collection of multiple sources of data, proceeds with collaboration and respect for participants, advances a plan of action, and, in the end, reflects both the researcher's and the participants' growth toward improved changes to practice.