



**Allan Feldman,
Herbert Altrichter,
Peter Posch
and Bridget Somekh**

TEACHERS INVESTIGATE THEIR WORK

**An Introduction to Action Research
Across the Professions**



Teachers Investigate Their Work

Now in its third edition, *Teachers Investigate Their Work* introduces both the theoretical concepts and the practical methods necessary for readers wishing to develop their action research.

Drawing from studies carried out by teachers and other professionals, as well as from the authors' own international practical experience, the book provides detail on multiple educational contexts from primary education to university training and beyond. It contains over 50 practical methods and strategies to put into action, and explores key areas, such as:

- the purpose, roots, and varieties of action research
- collaborating with a critical friend, research participants, or your peers
- choosing a data collection method
- observing and documenting situations
- making sense of your data
- action research for professional development.

This key text also provides crucial tools, such as:

- a simple 'quick start' nine-step guide
- a toolbox for producing written reports
- criteria for guiding the quality of action research.

A concise yet thorough introduction to action research, *Teachers Investigate Their Work* is an essential, practical, and easily accessible handbook for teachers, senior staff, and researchers who want to engage in innovation and improve their practice.

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Third edition

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Bridget Somekh started to work in action research with John Elliott at CARE-UEA, UK, in the 1980s. She was a founding editor of the international journal *Educational Action Research* from 1993 and for many years a coordinator of the Collaborative Action Research Network. She was Professor of Educational Research at Manchester Metropolitan University, UK, 1999–2008. Since then she has carried out consultancy work in New Zealand, Malaysia, and Hong Kong. Her books include *Action Research: a methodology for change and development*, 2006; and the *Sage Handbook of Educational Action Research*, 2009 (with Noffke). She is Adjunct Professor at the University of Canterbury, New Zealand.

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Introduction

What will you find in this book?

You have just opened this book, are slowly reading the first lines and starting to build up an impression of what may be contained in the following pages. How can we give you, the reader, an idea of the book's importance for us, what drove us to devote much energy and time to writing the first edition, revising it for the second edition, and now rewriting it a third time? Wistful thoughts like these invade the consciousness of many authors sitting in front of a manuscript that has achieved a certain status—or at least size—through being written, rewritten, and finally polished. It is now to be given the last finishing touch: the introduction, which will introduce some key ideas and motivate you to read on.

In the first and second editions of the book, we recounted some personal experiences that convinced us of the importance of action research—specifically, research conducted by professionals in order to improve their practice, come to a better understanding of it, and share what they have learned and done with others. For the most part, we retain this same approach to the introduction, even though the events that we recount have slid into the past far enough so that they may have occurred before you were born. However, to us, they still resonate as the salient experiences that brought us to devote our professional work to the furtherance of action research.

In the early 1980s, three of us (Bridget, Herbert, and Peter) were strongly influenced by the work of the Teacher–Pupil Interaction and the Quality of Learning Project (TIQL) in which teacher-researchers investigated what it means to understand a subject or a topic and how students' understanding can best be developed through classroom work (see Elliott, 1991). At that time, Allan was working as a high school teacher in Philadelphia in the US. While he was not aware of the language of action research, he engaged in reflective practice and wrote about his teaching (see, for example, Feldman, 1981, 1988). In 1989, he began to pursue his doctorate in education and was introduced to the literature of action research by his advisor, Mike Atkin, who was a friend and colleague of Peter and of John Elliott. During that time, he had the opportunity to serve as a critical friend

to Bridget, Herbert, and Peter as they prepared the first edition, by trying out many of the strategies and approaches with the Physics Teachers Action Research Group (PTARG) that he was facilitating (Erzberger et al., 1996; Feldman, 1996). These projects were exciting because teachers investigated the development of students' understanding in their own classrooms, shared their experiences, tried to identify and explain common and contradictory findings, developed and experimented with new teaching strategies, and wrote case studies of their work. Although we had different connections with these projects—as a TIQL Project teacher (Bridget), interested observers of TIQL (Herbert and Peter), and a facilitator of the PTARG project (Allan)—for each of us the experience was an important landmark in our professional development. The teachers' research provided us with new insights into the process of teaching and learning: it paid much closer attention to details and practicalities than other kinds of research; and it probed the differences between stated aims and actual practice in a way that integrated teaching with research. To show you what we mean here are some examples:

In the TIQL Project, Carol Jones (1986), teaching a mixed-age class of seven- to nine-year-olds, investigated their understanding of their schoolwork. She kept notes of what the children did each day, the tasks she set, and anything special about the way in which they carried them out. She soon realized that the children understood the tasks in terms of their previous expectations, and had developed an idea of the sort of work she, as their teacher, would be expecting. Her research then focused on "the extent to which children operate according to criteria of their own, rather than according to the intention of the teacher." She enlisted the help of an outsider who visited her classroom and interviewed the children. By transcribing and analyzing these interviews she found that the children's criteria for judging the value and importance of their work were, indeed, different from hers. For example, when they were asked to observe Puss Moth caterpillars, and make drawings and notes of what they saw, they made a clear distinction between writing and drawing, "holding writing to be a more 'worthwhile,' or higher status task, than drawing." In addition, because they were used to being given cards to help with spelling, one child had not understood that the work card gave instructions about how to observe the caterpillars, and instead said, "it just tells you the spellings." These data suggested that the children were not engaging in the kind of observation and interpretation that Carol had intended, but instead had turned the work into "a routine writing task." She also found that the children did not value working in collaboration as she did, but instead used the criterion of "liking to have your own ideas" and rejected sharing ideas, calling this "copying."

In addition to developing their own teaching, some of the TIQL teachers worked in schools where a number of other colleagues were also engaging in research. Thus, it was possible to discuss what they were doing and begin

to develop new-shared understandings. This kind of work can be a valuable professional development experience for many individual teachers, but in some schools, with the support of a member of senior management, teachers undertaking research can also make a significant impact on the development of the curriculum as a whole. For example, in a large secondary school, Brian Wakeman, one of the deputy heads, coordinated a group of teachers who all carried out research into aspects of their pupils' understanding and in this way built up a picture of the kind of changes that it might be helpful for the staff as a whole to implement.

(after Wakeman, Alexander, Bannister, Nolan, & Aspray, 1985)

A few years later, Allan worked with PTARG, which was an example of a group of teachers who taught in different schools who came together to engage in collaborative action research on their practice as physics teachers. PTARG was formed in 1990 and met on a regular basis for three years. The teachers continued to meet occasionally through the year 2000.

Although the teachers helped each other with their research, each had his or her own focus. One of the teachers, Sean Fortrell, had as his starting point for research the dissonance that he noted between the students in two different levels of introductory physics. He found that those in the "Conceptual Physics" class put their effort into attempts to arrive at conceptual understandings of physics. Students in his other course, who he thought to be more able, were principally concerned with getting the correct answers to quantitative physics problems. When he talked about this dissonance at a PTARG meeting, one of the other teachers, Andria Erzberger, told of how she required her students to write down the "approach" that they used to arrive at a numerical solution. This idea, which she had got from a physics text, has the students writing down in words the way that they will go about solving a numerical problem. Sean began to have his students do the same on their homework so that they would begin by describing how they solve problems rather than by writing down equations.

At the end of the school year, Sean reported to the PTARG group what he had learned from the data that he had collected about using this method to encourage his students to think about a problem before attempting to solve it: "What I found was that some students were comfortable with this idea of writing down an approach and others were not. Those who were not generally did not do it very much. Those who were, I found, latched onto it and used it pretty much the year through, especially in test situations. Most of them used it when the problems were difficult and they were searching around for 'How do I do this?' They would really sit down and write out their steps. I'm not sure how well it necessarily helped them ... For those students who were really reaching and trying to figure out in writing their approach, it would make very clear [to me] that they had no idea of what they were doing. They would write

out an approach and you could see, 'This is what they're trying to do and it doesn't make sense. That's not the way it should be done.' Very rarely would you find a problem where somebody wrote down an approach in full and then went through and did it all, and did it all right ... And so, their approach didn't describe how they would solve the rest of the problem. So, sometimes it really helped them, other times it just showed that they didn't understand what they were doing."

While Sean's adoption of Andria's technique did not necessarily give him his hoped-for results, as the year went on the other teachers became aware through their discussion of Sean's project of a similar dissonance between their goals to teach conceptual understanding of physics and the students' concern with getting the right answer. Ultimately, a concern for students' conceptual understanding led the group to the agreement that their goal for the next year would be to develop teaching methods and assessment techniques that would encourage conceptual as well as quantitative learning in all students.

(after Feldman, 1993)

Looking back after all these years we are reminded of the deep impression these projects made on us from our different points of view.

- For Herbert and Peter, as visitors from Austria with experience in educational research and teacher education, it was important and unusual that the TIQL teachers not only saw themselves as “users of knowledge produced by professional researchers” but also did research themselves—producing knowledge about their professional problems and substantially improving their practice. In their developmental work the teachers sometimes made use of external support (for example, in-service training courses and external consultancy from the project team) but, on the whole, retained the initiative in the work themselves. It was impressive that the TIQL teachers were reflecting on their experiences and self-confidently discussing them in public, thus successfully overcoming the notorious disregard for teachers' knowledge and the tradition of teachers working alone behind closed classroom doors.
- For Bridget, as a TIQL participant, it was an opportunity to stand back after 12 years' experience as a teacher and analyze the complexities of teacher-pupil interactions and their impact on children's learning. For the first time she described, and theorized about, her professional practice and found that others were interested. She realized that as a teacher she had insights into classroom processes that were of value in developing educational knowledge.
- For Allan, as facilitator of the PTARG project who had himself just recently been a high school physics teacher, it was an opportunity both

to see how many ways in which teachers similar to him could work together to generate new knowledge about their practice and to learn about the practice of action research. As we noted above, Allan was at that time a doctoral student at Stanford University and was a student in a course on action research taught by Peter. In fact, Peter met with the PTARG teachers and helped them with the analytic discourse (M4.6), and provided the teachers with new ways to think about their learning. This can be seen in Sean's comments about action research:

It reminds me of what Peter Posch was talking about last time, he impressed on me the idea that it's often more useful, especially in this sort of stuff [action research], to not give the conclusions but to tell the whole story because you can glean so much more from somebody else's experience hearing the whole tale than you can if you hear 'I've found that this kind of student conversation is good and this is how you should implement.' It's kind of empty, it loses something.

(Feldman, 1993, p. 112)

In both of these projects, practitioners understood themselves as "teacher-researchers" and they are not alone. Through action research networks like the Classroom Action Research Network (CARN),¹ the Action Research Network of the Americas (ARNA),² and many other around the world,³ and through our interactions with practitioners in many schools and universities, we have met enough individuals and teams working in a comparable way to understand why some people talk about an action research "movement."

This edition of *Teachers Investigate Their Work* will be published more than ten years after the second edition and 25 years after the first, which was published in 1993. Since then there have been ups and downs of action research, and teachers and other practitioners have had to contend with shifts in policies and regulations that constrain their practice. However, when we wrote the second edition we noted that action research had become much more widely accepted among many professional groups as a methodology for supporting development and change. This trend has been sustained and therefore we will continue to include in this edition examples from a wide range of contexts and professions. Our experience has been that drawing on cases from different professional groups is enormously helpful in allowing us to better understand our own practice as action researchers. Differences destabilize our assumptions and make it possible to ask new kinds of questions about our own cultural norms. We invite you to explore whether this is also the case for you, by making conscious comparisons between your own professional workplace and those described in our examples.

In this book we attempt to collect and present in concise form the various ideas, methods, and strategies for research that have been developed by European and American action researchers in recent years—in particular, in the fields of in-service education of teachers (Feldman, Bennett, & Vernaza-Hernández, 2015; Kayaoglu, 2015; Reed, Davis, & Nyabanyaba, 2002), initial teacher education (Capobianco & Ní Ríordáin, 2015; Cochran-Smith, Barnatt, Friedman, & Pine, 2009), staff development in higher education (Zuber-Skerritt, 2015), curriculum innovation (Somekh, 2006; Tan & Atencio, 2017), and environmental education (Kyburz-Graber, Hart, Posch, & Robottom, 2006).

The purposes of action research

John Elliott, whose work has been influential in the action research movement, gave this well-known definition of action research:

Action research might be defined as *“the study of a social situation with a view to improving the quality of the action within it”* (original italics). It aims to feed practical judgment in concrete situations, and the validity of the “theories” or hypotheses it generates depends not so much on ‘scientific’ tests of truth, as on their usefulness in helping people to act more intelligently and skillfully. In action-research “theories” are not validated independently and then applied in practice. They are validated through practice.

(Elliott, 1991, p. 69)

This definition directs attention to two of the most essential purposes for doing action research: the improvement of professional practice and situations, and the development and testing of the practical theories that guide one’s own practice and can be shared with others.

Action research is intended to support practitioner researchers in coping with the challenges and problems of practice and carrying through innovations in a reflective way. Experience with action research for nearly 50 years has shown that teachers, nurses, social workers, community support workers, and other professionals are able to do this successfully and can achieve remarkable results when given opportunities and support. Teachers, for example, have not only carried out development work for their schools but have also broadened their knowledge and their professional competency. They have passed on this knowledge to colleagues, pupils, and parents, and, in written and other forms, to the wider public. They have shown that teachers can make an important contribution to the knowledge base of their profession. And they have demonstrated that they can engage successfully with professional problems without recourse to external direction. When practitioners have engaged in action

research they have gone beyond developing and testing new routines by constructing new theories about their practice, including a critique of its educational and social contexts.

These practitioners are “normal” teachers, nurses, social workers, and community support workers who reflect on their practice to strengthen and develop its positive features. They are not prepared to blindly accept the problems they face from day to day, but instead reflect upon them and search for solutions and improvements. They are committed to building on their strengths and overcoming their weaknesses. They wish to experiment with new ideas and strategies, rather than letting their practice petrify.

We believe that action research as we describe it above is exemplified in the definition that Allan uses, with reference to Lawrence Stenhouse (1981, 1983):

Action research happens when people are involved in researching their own practice in order to improve it and to come to a better understanding of their practice situations. It is action because they act within the systems that they are trying to improve and understand. It is research because it is systematic, critical inquiry made public.

(Feldman, 2007, p. 242)

Through our book we aim to encourage all professionals to investigate those aspects of their practice that they want to improve and develop in their daily work and their relationships with colleagues, clients of all ages, and managers or administrators. We want to provide a range of methods that can help them to gain a more comprehensive view of their situation, develop action strategies to bring about improvement, and evaluate the outcomes of their efforts.

We want to encourage professionals to share their experiences and, by this means, to give a degree of publicity to the professional knowledge that informs their practice. The book contains some suggestions to make this possible. We believe that sharing ideas with colleagues, and keeping the public well-informed about professional concerns and endeavors, can contribute to raising the self-confidence of professionals and, thereby, improving both performance and job satisfaction.

Finally, the book is intended to stimulate the various professional groups to recognize the value of their work to society as a whole, in particular by taking control of the development of their organizations, and of the identification and resolution of crucial professional problems. The current period of rapid social change, even as professional practice becomes more regulated, offers exciting possibilities to build a more dynamic culture across the social services. This implies a need, however, for professionals and their leaders, individually and collaboratively, to

reflect upon their practice, analyze the functioning of their organization and its strengths and weaknesses, develop perspectives for the future, translate them into actions and structures, and monitor their impact on real situations.

Getting started: learning to be a researcher by doing research

Familiarity with action research can develop in various ways: one way is to read about practical methods and theories, another is to study what other practitioners actually did in order to reflect on and improve their practice. The wealth of examples in this book as well as collections of action research case studies, for example, Cochran-Smith and Lytle (1993), Mohr (2004), and Kyburz-Graber et al. (2006), among others, and journals such as *Educational Action Research*, *Action Research*, *International Journal of Lesson and Learning Studies*, *Journal of Research in Nursing*, and *International Journal of Nursing Studies* may enable you to do this. However, the best way to learn to do it is to do it. That is why we have structured this book as a guide and resource for doing action research, while providing along the way insights that we and others have developed about the methodology. We like to think of this as two parallel strands—practice and theory—tied together through the engaging in the doing of action research. Therefore, we have structured the book so that, first, it includes a wide variety of practical suggestions that have been developed by action researchers for investigating and introducing innovation into their practice and practice situations. To do this we use many examples drawn from studies by practitioners. The book does not contain any complete case studies written by practitioners, but if you are interested in reading this kind of outcome of action research you can find them in the sources that we cited above and throughout the book.

Second, we also want to provide readers with the theoretical background of action research that underpins the methodological suggestions and gives them meaning. We do this from time to time as part of the process of clarifying the various research strategies, as well as in Chapter 10, which offers a theoretical grounding.

Carrying out research is a project and like any other project it requires good organization and a combination of prior planning and on-the-job adjustments to the plan, moving from the initial starting point to some kind of conclusion. As a professional teacher, health worker, or manager you already have skills in planning a complex project and carrying it through; and this book is designed to help you experiment with more specific research skills in data collection and methods of analysis, so that you will learn to develop tentative explanatory theories about your working practices as the basis for developing action strategies. Researching one's

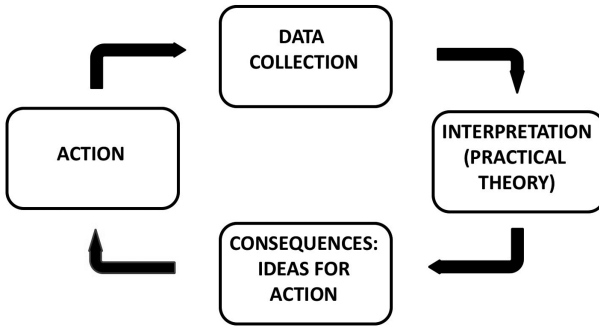


Figure 1.1 The circle of action and reflection.

own practice is immensely interesting and rewarding and, rather than thinking of research skills as something to be acquired in advance, we recommend you engage in small-scale research activities immediately and learn through experience.

The key to being a good researcher is not, however, just a matter of acquiring skills; it is important to understand the research process as an art to be continuously perfected rather than a set of procedures that can be applied unproblematically. There is never one clear, right answer to matters relating to human behavior, and research into social situations always involves uncovering the unexpected. To be a good action researcher you need to learn to reflect on what you do, speculate on the possible implications of every situation, and generate theories to be tested in action. Figure 1.1 presents action research as an iterative process that integrates theory with practice, through reflection and action planning.

Quick start guide in nine steps

In the dialogue that bears his name, Meno asked the following question of Socrates:

And how will you enquire, Socrates, into that which you do not know? What will you put forth as the subject of enquiry? And if you find what you want, how will you ever know that this is the thing which you did not know?

(Jowett, 1892, p. 80)

You may find yourself asking a similar question, “How can I learn to do action research by doing it if I don’t know what it is?” Rather than respond to you the way that Socrates did to Meno, we will rely on a technique developed by the educational psychologist David Ausubel.

He showed that learning new material is enhanced when students have a framework on which they can construct their new understanding. He called this type of framework an advance organizer: "I define advance organizers as introductory material at a higher level of abstraction, generality, and inclusiveness than the learning passage itself" (Ausubel, 1978, p. 252). The way that we provide you with this is with a quick start guide to action research so that you can get an overall sense of the whole process as nine components. Because they are all interrelated and not necessarily sequential we present them as a bulleted rather than numbered list.

- ***Identify a research support group***

If possible, you need to establish yourself as part of a group that can share experiences and provide mutual support. Often a research support group is made up of people who are not all from the same workplace. The important thing is for all members of the group to be involved in their own research, and to agree to meet regularly and be good listeners for one another. There are various strategies described in the book, such as analytic discourse (M4.6), that help groups to provide each other with high-quality support. In addition, Chapter 3 includes some of the different ways that action research can be done by groups.

- ***Identify your collaborating research partners***

These are usually people directly involved in the situation you will be researching. They might be colleagues or clients (children if you are a teacher). When you are choosing them, remember that the more closely involved these partners are in your research the more powerful it is likely to be in terms of bringing about change, but the less control you will have over the direction of the change.

- ***Begin keeping a record of your research activities***

This is often called keeping a "research journal" and Chapter 2 provides a lot of ideas about different kinds of research diaries, their purposes, and how to make them most useful to you. The key idea is to build up a record of all the impressions and ideas that come to you in the course of your professional activities so that you can think back on these over the weeks and months to come. On the day itself and the one or two days following, these are vivid and powerful but they are only held in short-term memory and will soon be lost if they are not written down. As you are more and more involved in researching your practice, the focus of your research journal will shift to more explicit recording of research activities.

- ***Decide on the starting point for your research and begin investigating it***

This is discussed in Chapter 4. Starting points can be of many different kinds. There may be some aspect of your professional practice that you find problematic and would like to investigate in order to understand it better. You may want to develop a new approach to some aspect of your practice in order to improve it. You may have a very specific question you want to investigate, but more likely you will just have a general area of interest. One of the reasons that we call it a starting point is that you are likely to change or refine your area of interest once you start researching. So how you start is not nearly as important as starting.

- ***Clarify your starting point***

This is the process of progressively refining your area of research through beginning to collect data and analyze it. It is discussed in the latter half of Chapter 4. You may find that your original focus is considerably changed during the early stage of your research. Sometimes this stage can be frustrating because data analysis is an important skill that you need to develop over time, so you may not immediately see anything very significant in your data. However, this stage can sometimes be very exciting as you begin to see things from new points of view. There are several methods and strategies (Ms) in Chapter 4, some to be carried out alone, and others involving your support group in giving mutual help with this process.

- ***Collect data systematically***

Data collection has already been an important part of your research in the components described above, but Chapter 5 gives a lot of ideas for different methods of collecting data more systematically. It is important to experiment with different approaches and learn how best to collect rich data. For example, interviewing is a complex process and different approaches to interviewing will result in very different accounts from the same interviewees. Some data are in this sense richer than other data. But what counts as rich will vary and is very much a decision for you to make. Comparing different kinds of data and discussing how they were collected and what makes them more or less rich is always a very useful focus for the research support group.

- ***Analyze data***

The most fascinating, but also initially the most difficult, part of the research process is data analysis. Typically, new researchers find it difficult to “see”

what is significant in their data, but there are a number of techniques that are very helpful and the methods and strategies (Ms), as well as the more detailed theoretical discussion of the process of analysis, in Chapter 6 should make this stage of becoming a researcher particularly interesting and rewarding. Once again, involvement of your support group and/or research partners will make an enormous difference to how quickly you can acquire the necessary sensitivity to data to become good at analysis.

- ***Developing action strategies and putting them into practice***

In practice, as soon as you begin recording your impressions and reflections in your research notebook you will feel the urge to start taking action. This very immediate feedback from research into practice is one of the great benefits of professionals getting involved in action research. When you are beginning to develop greater competence as a researcher, you will be able to plan action strategies more systematically on the basis of practical theories you have developed. This process is described in Chapter 7. When action strategies result in the improvements you aimed for, it takes your research one further step forward by demonstrating the utility of your practical theories for improving practice situations.

- ***Make your knowledge public***

Lawrence Stenhouse (1975, p. 142) defined research as “systematic inquiry made public,” and however powerful your research is for your own professional development or the improvement of your practice situation, we believe that, following Stenhouse, for it to be research it must be shared with others. In Chapter 8 we discuss the many different ways that professionals can make their research knowledge public, and the reasons why this is important for both the status of the professions and the benefit of clients (students, patients, etc.). In practice, action research is never a “finished” process because each set of “findings” gives rise to new ideas for action strategies, and another cycle begins. However, it is important to decide on a cut-off point and write up the research and/or present it formally to an interested group (for example, peers, parents, administrators, or policy makers). When accounts of multiple but related action research studies are brought together for cross-case analysis, the findings become increasingly stable and capable of informing the action strategies of other professionals working in comparable settings (Somekh, 2006).

An important cautionary note is that much of what is written about action research, including this book, may give the impression that it is a step-by-step method that follows a set pattern called the “action research cycle.” For example, the nine components of our quick start guide above proceed from data collection to data analysis to the development of action strategies,

and finally to the implementation of those strategies. Unfortunately, when action research is represented as a step-by-step cyclical process it may then be implemented as such by practitioners. As a result, we may hear them making statements such as “I’m in the reconnaissance stage of my first action research cycle” or “I’m getting ready to start my second cycle.” This rigid interpretation of the methods of action research can get in the way of reflection and action on reflection on a continuous basis (see the discussions of reflection-in-action and reflection-on-action in Chapter 10). Unlike those engaged in more academic research in which it is possible to spend months or even years on the collection and analysis of data, and then making the results public, practitioners engaged in action research need their inquiries to be useful within the time frame of their practice (Feldman & Atkin, 1995). For teachers it could be the next class and for nurses or social workers the next patient or client. Instead of this rigid model of what it means to engage in action research, we think of it being a process in which these steps happen almost simultaneously in a continuous set of “mini” action research cycles as the doing of research and engagement in practice interact seamlessly with one another. As you read on through Chapters 2–8, keep in mind this notion of mini-action research cycles and how they constitute the larger action research cycle.

Features that distinguish action research as presented in this book

There are many different conceptions of action research, or more broadly, practitioner research (see, for example, Feldman, 2017; Lytle & Cochran-Smith, 1990; Zeichner & Noffke, 2001). In writing this book we draw most closely on the traditions of action research deriving from the work of Elliott and Stenhouse, which in turn draws heavily on the work of Dewey and Bruner. We present our stance on action research in the following five principles:

- 1 Action research is carried out by people directly concerned with the social situation that is being researched. In the case of the social situation of a classroom this means in the first place teachers who take professional responsibility for what goes on in the classroom. While action research will usually be initiated by individual practitioners (teachers, nurses, social workers, etc.), sustainable improvements will rarely be possible if other concerned persons do not become won over to its purposes. According to the problem being investigated, these might include in the case of teachers: students, parents, administrators, or representatives of the local community. In the case of nurses, they might include patients, their families, physicians, and health insurance administrators. Thus, the long-term aspiration of action research is always a collaborative one. In cases

where action research begins as a more private and isolated concern, external consultants are often involved, for example, from higher education institutions. However, we strongly believe that in these cases the role of the outsider is to provide support and not to take over responsibility and control over the direction and duration of the project.

- 2 Action research starts from practical questions arising from everyday professional practice. It aims to improve the practice situation, the knowledge and skills of the action researchers, and to make this new knowledge available to others.
- 3 Action research must be compatible with the educational values of the workplace and with its working conditions (see Chapter 5 for a more extensive discussion of this point). However, it also contributes to the further development in the direction of increased social justice for all involved.
- 4 Action research offers a repertoire of methods and strategies for researching and developing practice that is characterized by a sensible ratio of efforts to results. Methods are tailored to what is achievable without overly disrupting practice or placing too large a burden on the action researcher and other participants.
- 5 Action research is characterized by a continuing effort to closely inter-link, relate, and confront action and reflection; to reflect upon one's conscious and unconscious doings in order to develop one's actions; and to act reflectively in order to develop one's knowledge. Both sides will gain thereby: reflection opens up new options for action and is examined by being realized in action.

The contents of the book and how it might be used

Our intention in writing this book was to introduce readers to action research. It is primarily for professionals who want to engage in innovation and improvement in their practice situations. The most rewarding use of this book will be for those who are prepared to engage in an action research process alongside their reading. They can make immediate use of the suggestions and proposed strategies while, at the same time, critically examining and further developing them. In this way, the book is intended as a source of practical support for those engaging in research, without in any sense being prescriptive.

Notes

- 1 CARN is an international network linking all those interested in action research through regular conferences and publications. See the CARN website for up-to-date information: <https://www.carn.org.uk>

- 2 “ARNA was initially organized in 2012 by five ‘network initiators’ with a vision to support and promote a wide variety of forms of participatory research that would be shared to increase knowledge production, knowledge dissemination and knowledge democracy for critical, social, educational and environmental issues in the Americas and beyond” (ARNA, 2017). See the ARNA website for up-to-date information: <http://arnawebsite.org/>
- 3 For information about the many different networks see Part III Action Research Networks in Local and Global Contexts of *The Palgrave International Handbook of Action Research* (Rowell, Bruce, Shosh, & Riel, 2017).

The research journal

Companion to the research process

Much of what is written about action research, including this book, suggests that it is a step-by-step method that follows a set pattern called the action research cycle. However, while this pattern is a useful way to talk, write, and learn about action research, the practice of action research is often more complex because it is research on ongoing practice. That is, even as we collect data, we are immersed in the practice we are studying. The collection of data affects our practice directly and indirectly because as we collect data we become more knowledgeable about our practice, which changes the way we talk about it and the way we choose to act in our practice situations. The converse also occurs—as we engage in our practice we become aware of new aspects and contingencies that affect our choices of starting points and data collection methods.

What this suggests is that as we go through an action research cycle, we are actually going through many “mini” action research cycles as our doing of research and our practice interact with one another. As we proceed through Chapters 2–8, we will return to this notion of mini-action research cycles and show how they constitute the larger action research cycle. We begin with the research journal.

The research journal is one of the most important research methods and is very commonly used by practitioners doing research on their practice. It also makes a good way into research. We want to suggest that you regard it as a companion to the whole research process, rather than simply as a means of collecting data or recording analysis. Our suggestions for writing and using research journals are based on personal experience as well as experience of working with others keeping similar journals. At the end of the chapter we provide some exercises that should make it easier to start a research journal. For the most part our experience has been with either paper journals or ones using computers to type into text documents. In the ten years since the publication of the previous edition of this book, various types of social media using Web 2.0 applications on all types of devices, including smart phones and tablets, have changed the conception of how one would keep a journal. We believe that much of what we have to say

below, which is based on our and others' experiences with paper journals, also applies to ones kept using new technology. The most significant difference is that journals can now be interactive in real time. It is no longer necessary for people to physically come together to read, reflect, and comment on each other's journal entries. We provide some examples and suggestions as to how this can be done in the M exercises later in this chapter.

The role of journals in research

There is a long tradition of using journals for research and scholarship. "From the very beginning of European culture texts have been written with the aim of increasing self-understanding, becoming aware of self-delusions, and articulating and reducing pain" (Werder, 1986).¹ Journals in which the self and its surrounding conditions were investigated include Saint Augustine's *Confessions*, *The Country Diary of an Edwardian Lady*, *The Diary of Lady Murasaki*, *The Diary of a Young Girl*, and *Twelve Years a Slave*. Published accounts like these stand out in a sea of anonymous journals by writers whose reflections on themselves and on their everyday lives remained unpublished. At first sight, such journals may appear to us as self-reflective or introspective texts or as "literature" but only rarely as research. This does not mean, however, that introspective journals cannot lead to important insights or that they are necessarily self-indulgent.

In many disciplines, journals hold a central position in which researchers recall the fruits of their daily observation in the research field: for example, in zoological field research, DeVore's (1970) journal containing his observations on the behavior of apes; or in ethnographical research, Malinowski's (1982) use of a journal to record his detailed observations. Qualitative sociological research makes intensive use of research journals in building up thorough insights into the functioning of institutions through participant observation and through conversations with key informants: for example, the famous studies of the Chicago School, such as Whyte (1955) and Cressey (1932). Whether they are called journals, log-books, field notes, or laboratory books, these records are important companions to the research process.

There is also a tradition of using research journals in *qualitative educational research* as a result of the influence of ethnography and sociological field research. Examples include the highly readable ethnographies by Alan Peshkin (1988). An early example of this qualitative school research is Philip Jackson's *Life in Classrooms*. In this book, the author tried to "move up close to the phenomena of the teacher's world" (Jackson, 1968, p. 159). As a participant observer he had to use a mixture of methods and perspectives since "classroom life ... is too complex an affair to be viewed or talked about from any single perspective" (p. vii). More recently, Jackson had turned to autobiographical methods to reflect upon his experiences as a

pupil and a teacher to delve into the complexities of teaching and learning (Jackson, 1992).

Given this tradition of the use of research journals in educational research, it is not surprising to find articles and books that argue for their importance and provide methods for keeping a journal. Valerie Janesick (1999) provides a particularly persuasive argument. She sees research journal writing as providing an opportunity for us to reflect on the words, beliefs, and behaviors that we include in our journals. It also provides a way for us to question our assumptions, assertions, and conclusions. This is important because, as Janesick reminds us, when we do qualitative research, we are the research instrument. In addition, through journal writing and reflecting on what we have written we can clarify through the reflection and the writing process involved in journal writing the roles of the researcher and participants.

Another qualitative researcher, Simon Borg (2001), has written about what he has learned about doing research on language teaching through the process of keeping a research journal. Borg defines a research journal as “a form of reflective writing which researchers engage in during a project and through which they document their personal experience of the research process” (p. 157). As a result of analyzing his own journals, he found that by keeping it, it helped him to better understand his research situation and write up his report, and to assuage anxiety and deal with negative feedback. In addition, Borg’s research journal served as an educational archive (Holly, 1989) of his research experiences that he analyzed retrospectively. By treating his journal as data, he found that he benefited from having kept the journal in the following ways:

- 1 It served as a reminder of past ideas and events that guided subsequent action.
- 2 It provided a record of plans and achievements that facilitated evaluation.
- 3 It supplied an account of events and procedures that allowed a more detailed write up of the study.
- 4 The journal allowed me to recall and to reproduce the thinking behind key decisions in my work.
- 5 The research journal comprised an instructive narrative of my professional growth.
- 6 The journal provided physical evidence of progress that gave me a sense of achievement and motivated me.
- 7 The journal provided an account of experiences and ideas that, when returned to, often sparked off further insights.

Action research has drawn upon this tradition of journal keeping in educational research. Research journals containing observations, ideas, and,

plans (Attard & Armour, 2005) have been increasingly used during the past years by those interested in action research (for example, Glover, 1993; Strieb, 1985). For example, Fuller (1990) and Williams (1990) made a journal the basis of their data collection to investigate ways of enabling children to become more autonomous learners. Similarly, Griffiths and Davies wrote critical autobiographical journals of their experience conducting a series of action research cycles into aspects of equal opportunities in the classroom (Griffiths & Davies, 1993). It is important to note that its legitimacy as a research method has increased dramatically in the past ten years as narrative forms of inquiry, including autobiography, memoirs, and autoethnography, have become accepted forms of educational research (Attard & Armour, 2005; Carless & Douglas, 2010; Elbaz-Luwisch, 2004; Ellis & Bochner, 2000; Quicke, 2010). In fact, for some, journal writing has become synonymous with practitioner research (for example, Griffiths, 1994). In North America, this has been due largely to the influence of the Writing Projects (Jago, 2003; Lieberman & Wood, 2002). These local collaboratives of teachers of writing and of literacy practices have made teacher research a central part of their work, with the process of journal keeping and reflecting in and on it being the prime research method (Holly, 1989). As Holly has noted, "keeping a journal can facilitate observation, documentation, and reflection on current and past experiences, including one's life history and the social, historical, and educational conditions that usher in the present" (p. ix).

We believe that journals have a special role in action research, in addition to all that we described above.

- 1 Writing a research journal *builds on an everyday skill* of many practitioners. In this sense, writing a research journal is simpler and more familiar than other research methods, such as interviewing. In addition, journal keeping is easier to organize than most other research methods. It is always possible to make a journal entry, on paper or electronically, if time is available, whereas to carry out an interview you need to set up a meeting with the person who is willing to engage in a dialogue with you, using questions that may or may not have been prepared in advance.
- 2 A research journal *can also contain data collected by other research methods*. For example, it is a good place to record notes from unstructured observations or the description of the context and conditions of an interview just carried out. In this way, the research journal becomes similar to the laboratory notebook kept by scientists. Scientists' laboratory notebooks contain their hypotheses and research questions, their research design, the data that they collect, and their data analysis. They also make records of their discussions with colleagues and any ideas that come to them during the course of the research. In short, the

- laboratory notebook is as much as possible a complete record of the research endeavor. Although you may not want to use your research journal in this way, the point that we are making is that it can be used for much more than purposes of reflection.
- 3 Short memos or ideas about the research issues can be recorded frequently in a research journal. Because of this *continuity* a research journal can develop a quality that makes it more valuable than other research methods: it becomes a companion of your own personal development through research; it links investigative and innovative activities; it documents the development of perceptions and insights across the different stages of the research process. In this way, it makes visible both the successful and (apparently) unsuccessful routes of learning and discovery so that they can be re-visited and subjected to analysis (Borg, 2001; Holly, 1989; Janesick, 1999).

To sum up, on the one hand, research journals can contain *data* that are obtained by participatory observation and by conversations and interviews in the field, sometimes enriched by explanatory comments and photographs; on the other hand, they can contain written *reflections* on research methods and on your own role as researcher (perhaps similar to the conversation of the ethnographer with him or herself in a foreign culture). In addition, ideas and insights can be noted that lead to the development of the theoretical constructs that in turn can be used to interpret the data and guide action. Keeping such a research journal ensures that data collection is not artificially separated from reflection and analysis, nor from your actions as a practitioner. Corbin and Strauss (2015) have emphasized that analysis accompanying such data collection should be actively used for the further development of research: preliminary results of an analysis show which data are still necessary to fill in the gaps in a theoretical framework and to evaluate intermediate results through further investigation. In addition, the regular keeping of a research journal in which you record data and reflections and other interpretations results in an almost continuous stream of the mini-action research cycles that we discussed above.

Some suggestions for writing research journals

In this section, we present some ideas and suggestions for writing research journals. These are based on our own experiences, some of which have been positive and others frustrating, but all of which have deepened our understanding of journal keeping as an instrument for action research.

Writing a research journal is an individual matter. In due time, every journal writer develops a style and idiosyncrasies that are an important part of making journal writing valuable as a research method. For this

reason, our recommendations are offered only as suggestions that you should adopt or reject after due consideration. Many of them are similar to those suggested by Progoff (1992) in his intensive journal workshop and those of Rainer (1978) based on the workshop that she taught with Anaïs Nin.

Getting started with your journal

- 1 Journals should be *written regularly*, at times that fit in with the kind of research question being investigated, for example, after each lesson in which a particular teaching strategy has been implemented, or after each meeting with a “difficult class.” Some people find it is useful to reserve specific periods of time for this activity by writing them into their timetable, to prevent journal keeping being drowned in the whirlpool of daily necessities. These “journal times” can then be complemented and expanded by irregular recording of relevant scenes, experiences, and ideas.
- 2 People who are not used to journal keeping often experience some barriers to establishing the habit. Sometimes it is necessary to go through a difficult period before journal keeping becomes personally satisfying. When deciding whether the exercise is worth the time and effort, it is worth considering its side effects. For example, regular journal keeping generally increases the quality and speed of one’s own written articulation. We found journal keeping easier if we collaborated with a research partner to whom we could read extracts from our text and talk about them. This, in turn, had spin-offs in terms of increased understanding that enriched the whole research process.
- 3 The above suggestion, however, does not take away from the *confidential nature of a journal*. The decision to make parts of it available to other people should always remain with the author. It is particularly important to stress this again and again in projects, courses, and workshops in order to prevent the recurring subtle, social pressure to go public, on the principle, “I have said something, now it’s your turn.” The assumption that entries in a journal are confidential gets severely tested when Web 2.0 applications like blogs and wikis are used. We discuss this below.
- 4 Feel free to disregard *considerations of style or punctuation* while writing it. Self-censorship often disturbs the free flow of thoughts; this can come later if the results of your research activities are to be published. Again, this recommendation may need to be modified for web-based journals. You may want to have a two-step process in which you first write freely in the style suggested by Peter Elbow (1998) in M4.5, and then refine it for posting on a website. In any case, remember that because it is *your* journal, you need not share it with anyone.

How to keep a research journal

- 5 For the most part we have handwritten our journals in notebooks (of more than 40 pages). We have found that these become more and more “elegant” the more we enjoy journal writing. With the advent of highly portable devices like tablets, some may find it as convenient to keep their journals electronically. Some people use a computer to keep their journal. While this makes it easier to do subsequent data analysis and to include non-textual material such as photographs, videos, and audio files, computers are not as portable or accessible as a notebook or tablet.

Other researchers write their notes on loose leaves that they can file later under different categories. An elementary school teacher, who focused on introducing innovative methods of teaching reading, wrote her journal notes on colored sheets that she put between the white sheets of her lesson notes. In this way, she obtained a good record of the relationship between plans and the experience of putting them into action. Find a form to suit yourself—the most important part of keeping a journal is writing.

- 6 No matter what form you use to record your journal entries, it is important to be able to record changes, additions, or references to other parts of the research journal or to other data, at a later date. This is especially helpful for the analysis of journal data (to which we will return in Chapter 6). Notes (from single words to sentences) can be entered indicating the meaning or interpretation of a journal sequence within the framework of your research aim. Having a way to revisit and make notes and comments is also important for coding and for identifying examples to illustrate particular concepts (see M6.2).

When we write in our notebooks we leave a wide *margin* on each page for this purpose. Generally, we use different color ink to record provisional codes or analytical commentaries on journal entries, because it contrasts with the ink of the normal text and catches the eye more easily. This can, of course, be done using the applications that you would use on a digital device by using highlighting, comments, strikethroughs, and other reviewing tools. This process is illustrated in the journal extract that follows in the next section.

- 7 Each entry should be accompanied by the following information:
- the date of the event (and date of the written record if it took place on a different day),
 - contextual information, such as time, location, participants, focus of study, and anything else (such as unusual weather or a fire drill) that seems important for the research.

If this is ordered in the same manner for all entries, it is likely to be easier to “read oneself back in” to the data at a later date.

- 8 It is easier to orientate yourself quickly and analyze the data if paragraphs, headings, subheadings, and underlining are used to *structure the text*. Some people like to number paragraphs and headings to make cross-referencing easier.
- 9 It is helpful to make a running *list of contents* to make it easy to go back to particular pieces of data. You can do this on the first or last pages of a paper journal, or using links from the list to the specific contents in a digital journal.

Using a research journal for data collection and analysis

- 10 Everything that you put in your journal is data. Some of the data are more factual or descriptive, while other data are more interpretive or inferential. The important thing to remember is that all information that helps you to develop a more profound understanding of your practice situation and can help you to reconstruct it later can and should be included in your research journal. Therefore, make sure to include “feelings, reactions, interpretations, reflections, ideals and explanations” (Kemmis & McTaggart, 1982).
- 11 Research journals can also contain a great number of vivid descriptions of situations, sometimes called “thick descriptions” (Geertz, 1973). These provide a quarry of examples for in-depth discussion. They also provide vicarious experiences that are particularly useful as a means of helping other teachers to reflect on practice. We find that materials of this kind are very useful for in-service courses, enabling practitioners to learn more independently and still remain close to experience.
- 12 You can also include items in your journal that seem relevant to the research process: ideas jotted down on a piece of paper, photographs, or copies of documents such as pupils’ work. If research activities and the data obtained by them (for example, a transcript of a lesson or an interview) cannot be written directly into the journal because of lack of space or for other reasons, it is a good idea to make a cross-reference to them in the journal. If you are keeping a digital journal it is easy to take photos using your phone and paste them into the documents.
- 13 In this way, a research journal contains various kinds of records. This wide-ranging approach corresponds to our everyday form of tackling problems, but it is open to some pitfalls. For example, in general we expect research to go back and forth between description and interpretation. Because of their practical forward-looking interests, teachers, nurses, social workers, or other practitioners doing research are often inclined to neglect detailed description. It is useful, therefore, with each journal entry, to make clear whether it refers to description or to interpretation. One way of coping with the fuzzy borderline between

description and interpretation is to use the “ladder of inference” described in M5.1.

- 14 As we noted above, it is often very helpful in extending the research process to read sequences from your journal to a colleague or a research partner. The conversation about experiences can provide deeper insights into the fine texture of practice situations. Such conversations are especially fruitful if the researcher is rigorous in relating speculations to interpretations and descriptions recorded in the journal or other data—in other words, relating ideas to specific events and reflections rather than allowing the conversation to become diffuse and generalized. The sharing of digital journals with online productivity applications, blogs, and wikis can make this process more immediate and open up your thoughts and ideas to the comments of others. That said, if you want or need your journal to be confidential, you would need to limit how open you make it to others.
- 15 From time to time it is helpful to do a *provisional analysis* of the journal entries (see Chapter 6). This shows whether descriptions and interpretations are in a useful balance, which of the initial research questions can be answered from existing data, and which data are still necessary. Through this provisional analysis it is often possible to reformulate the initial questions more clearly, to modify them, or to pose them in a new way. It also helps you to plan the next steps in research and action in a more rational way. Last but not least, it reduces the danger of being flooded by “data overload” toward the end of an investigation.

Productivity apps, blogs, and wikis

Whether you keep your research journal on paper or in an electronic file, it remains a private document until or unless you decide to share it with others. Everything changes if you write your journal on the web. Unless you are working behind a firewall (for example, a course management system or a school intranet), as soon as you post it, it is available to anyone. That said, there are advantages to making at least some aspects of your research journal public. The most important one is that journal keeping can become a group activity in at least two ways. First, individuals can keep their own research journal, which they make accessible through the Internet to their critical friends, who respond through comments and questions that help move the research forward. This can be done in a variety of ways, but we suggest using what are generally called “online productivity apps.” These include Apple iWork, Microsoft Office Online, and Google Docs, among others. These allow the author of the research journal to “share” the document with others, who have the ability to read, edit, and comment directly on the journal in real time. Because the journal is only accessible to those

who the author has shared it with, it retains some of the properties of a semi-private document, which we discuss below.

A second way that the research journal can be shared through the Internet is to make it available to anyone on the web. The two most common ways to do this is through a blog or a wiki. A blog is basically a journal written on a website. You can prepare your journal entries in the same way that you would on paper with a word processing application, and then post it to the blog website. Typically, the blog posts appear in reverse chronological order with the newest at the top of the webpage, and older ones following. All posts are usually marked with the time and date that they were posted to the blog. There are now numerous websites that host blogs. They include WordPress.com, Blogger.com, and Tumblr. All allow you to add images and video as well as text. Some provide readers with a way to comment on the blog, but, for the most part, blogs are used to deliver information and opinions, rather than to engage readers in dialogue. The latter can be done using a wiki. A wiki has a far more open structure than a blog and allows others to change what one person has written. In some ways, wikis can be thought of as online productivity apps that are open to the world, not just the people with whom you share your research journal. The best-known example of a wiki is Wikipedia. Wikipedia is an online, open source encyclopedia written by anyone who wants to contribute to it. Those contributions can be original articles or changes made to existing articles. We believe that a wiki is best used in action research as a way to gain the “wisdom of the crowd.” The wisdom of the crowd is the sharing and aggregation of individual knowledge using Internet-based applications like wikis (Surowiecki, 2005). Surowiecki argued that due to the diversity of opinions, independence of thought, decentralization, and aggregation of ideas, the collected wisdom and insight of the group could come to know or understand better than any of the individuals, no matter how much expertise any one of them has. Given this, it would be possible for collaborative action research groups, or even collections of groups, to use an application like a wiki to engage in a type of meta-analysis that transcends the action research done by individuals or small groups. Of course, once research journals are made public through blogs, wikis, or other online platforms, they no longer retain any of the characteristics of a private document—they are out there for anyone and everyone.

Ethical issues relating to keeping a research journal

Our first step in discussing ethical issues related to keeping a research journal is to compare it to both the personal diary and the laboratory notebook. In some cultures, the personal diary is thought of as a private

record, and that for someone other than the writer to read it without prior permission would be an extreme breach of propriety. In fact, the traditional diary has a lock and key to help ensure its private nature. The laboratory notebook, on the other hand, is very much a public document. In addition to helping to ensure the validity of the research, it is considered a legal document for the purpose of acknowledging the primacy of discoveries and the granting of patents.²

As we see it, the action research journal lies somewhere between the personal diary and the laboratory notebook in terms of its private or public nature, and can be considered a semi-public document. While these journals are usually private to the researcher and may contain intimate accounts and reflections, there is the possibility that for the purposes of the research some of their contents would be made public. Because action research is research on practice and includes other human participants, the contents of the research journal should not be made public without consideration of the participants. That is, permission to do so should either be gotten before the collection of data begins (for example, through the use of a consent form, if required by the institution, ethics committee, or institutional review board (IRB)), which we discuss below, or it should be gotten before any data involving them is made public. This should be the case even if anonymity of the participants is maintained (see Chapter 8 for more details).

When journals contain interview data or observation notes as in the extract from an English teacher's journal below, it is usually best to clear the data immediately with the person concerned. Note, however, that it is not usually necessary to clear your interpretations with participants. If you wrote your data in your notebook, it would be necessary to hand the journal to the participant open at the relevant passage (though this has the disadvantage that the person is not able to reflect on it except in your presence—since the journal as a whole is confidential), or to make a copy of the passage that you can give to him or her. If the data are in digital form, you can share it electronically, but remember that email or other electronic files can be readily copied and distributed, and may be considered public documents. Clearly, these ethical issues become much more complicated when Web 2.0 applications are being used to share journal entries. Extreme care must be taken to not make public confidential information. This is true even if the anonymity of the participants is maintained. Action research is usually done in highly contextualized situations with small numbers of participants. Therefore, even if people are not named, their identities could be surmised.

An important ethical rule is never to allow research to become covert. Journal notes of conversations in the staff room or in casual situations, such as on the way to the cafeteria, are often the most useful of all, and providing colleagues and children know that the research is being

undertaken they do not all need to be cleared. To ensure research is not covert: (i) tell colleagues and children that you are undertaking it; and (ii) clear any data before you refer to it or quote it publicly.

The ethical issue that we are dealing with here is *informed consent*. We like to break this concept into two parts. One is the need to inform participants and stakeholders that you are engaged in a research study. The other is the need to seek consent of those involved in your research. This is especially important for those whom you have power over, such as pupils, patients, and clients. You should provide them with a way to decline to participate in your research without negative consequences. For pupils, patients, and clients who are underage, you should seek permission of their parents or guardians.

The issues that we have discussed here are sometimes under the purview of an ethical committee or an IRB. Universities and other research institutions usually have a board or committee that reviews research projects to make sure that they comply with the rules and norms of ethical treatment of human subjects. You should find out whether your institution has an IRB or its equivalent and comply with its rules for review. Similarly, local educational agencies such as school boards have enacted regulations that govern the doing of research in schools, and hospitals and social agencies also have rules governing research done in their institutions. It is imperative that all practitioners find out what those regulations are and to comply with them.

Memos and in-depth reflection

In the remainder of this chapter, we look closely at two different types of journal entries: memos and in-depth reflections. We provide examples of each type of entry after we describe them. You may find it useful to refer to those examples as you read about the types of entries. As with all the action research methods that we describe in this book, do not feel like you must know how to keep a journal before you begin. Learning how to keep a research journal is best done by doing it.

Memo

Memos are the most frequent kind of entries in research journals. Memos are produced when trying to recall and write down experiences that occurred in a specific period of time (for example, during a lesson or session with a patient or a client). The memo often provides the only possibility of collecting data on your own practical activities without too much investment of time and energy. Sometimes, action researchers fear that

after a delay of an hour or more they will not be able to remember in enough detail, or with sufficient accuracy, to write useful memos. In our experience, this is not too much of a problem, particularly if you follow procedures that help to improve the quality of your recall. For example, Bogdan and Biklen (2006) suggest:

- The earlier a memo is written after an event the better.
- Before writing down from memory you should not talk about the events with anybody as this may modify your recollection in an uncontrolled way.
- The chronology of events is generally the best way to arrange written records. However, as it is important to make entries as “complete” as possible, anything you remember later can be added to the end.
- Sometimes it is possible to jot down catchwords and phrases during the course of the activity you want to record: for example, when pupils are working independently, with partners, or in groups; when you are listening to pupils reporting back to the class; or when you are not teaching but observing a colleague or a student teacher. Later on, when writing the journal, these catchwords and phrases jotted down during the lesson prove very useful as aide-mémoire.
- Memory improves if you can find time and leisure for recall. If activities are to be documented in a memo, it is useful to reserve some time afterwards that can be kept free of interruptions. The time necessary is often underestimated. In general, it is easy to spend a full hour writing down observations and reflections. You should plan to spend at least half an hour, particularly as you may find you get delayed in starting!
- Memos are written primarily to describe and document events after they have taken place. At the same time, these descriptions are usually frequently interspersed with interpretations. Within memos, it is important to make a clear distinction between *descriptive sequences* and *interpretative sequences*.

Descriptive journal entries

Descriptive entries contain accounts of activities, descriptions of events, reconstructions of dialogues, gestures, intonation, and facial expressions; portraits of individuals—their appearance, their style of talking and acting; and the description of a place or facilities. Your own behavior as the action researcher is, of course, an important part of these descriptions.

In any descriptive passage, the detail is more important than the summary, the particular is more important than the general, and the account of an activity is more important than its evaluation. Whenever possible,

speakers should be quoted exactly (indicated by quotation marks) or in a paraphrase (some people indicate this in a journal by single quotes). Words and phrases that are typical of a person, group, or institution should be written as exactly as possible.

Interpretive journal entries

Memos should contain not only descriptive entries but also interpretive entries: interpretations, feelings, speculations, ideas, hunches, explanations of events, reflections on your own assumptions and prejudices, development of theories, etc. Interpretations will occur not only when writing down experiences but also at a later date, when journal entries such as observation notes are reflected upon.

An example taken from a research journal

It seems important at this stage to give an example from the kind of research journal we have been describing. You may find it useful to cross-check the example with the suggestions outlined in the previous section—which ones have been adopted and which not, and why might that be? The excerpt is not intended as a model of “the right kind of research journal,” rather it demonstrates the personal and highly focused nature of journal keeping.

The excerpt is taken from a research journal kept by Bridget when she was an English teacher in a secondary school and was introducing computer use in the teaching of writing. It was kept over a six-month period. In this excerpt, a visitor (who is hoping soon to become a teacher) was asked to make observation notes (some of which are quoted and commented upon in the journal). Bridget saw this as a good opportunity as none of her colleagues had been able to observe her classes. There were eight groups of children writing stories collaboratively: four groups had access to writing on one computer at the same time (using four replacement keyboards and software that divided the screen into four separate writing areas), and four groups were doing their writing on paper. As well as this story writing the groups were engaged in drawing maps, making lists of necessary equipment, and other related activities. In practice, two pupils from each group were usually at the computer at the same time—one sitting at the keyboard and the other standing behind and sharing in the process of composition. The other two group members were working on the maps, equipment lists, etc.

On the left side of the journal Bridget left a margin. After a first review (a provisional analysis) of the journal she entered several catchwords and references that are explained in more detail later in this chapter, for example, MNs (methodological notes) and TNs (theoretical notes). Entries

coded with “☐” are planned activities to happen on specific dates. While this example is of a planned observation, entries in research journals can and should include observations, reflections, and comments that come about spontaneously.

Extract from a secondary English teacher’s research journal.

Nov. 14: Notes and reflections after talking to Susan, a visitor who observed my lesson.

MNI observation notes	Susan focused more than I expected on the high level of noise. Her expectations seemed a bit unrealistic—told myself that she must have gone to a very formal school, but I felt quite vulnerable although probably didn’t show it. Is it worthwhile getting observation notes in this way from anyone who happens to come along? It would be nice to have a regular critical friend/partner, but as I don’t this seems the best compromise.
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Susan said:

(1) Group 1 seemed to be very reliant on Amnon—that at the beginning Billy was “crawling all over the table ... very disruptive.”

TNI individual differences?	Comment: Is this because Amnon is known as the computer expert? Billy misses some classes for help with reading. Can I give him extra time to make up?
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(2) Group 2 was working well—Robert and Tim mainly at the table and Quentin and Keith at the computer—periods of lapses, but on the whole working O.K. Quentin and Keith were the motivating powers. Quentin wanted to ask Keith’s advice. Keith felt he was in control. They had Carlo on their left—and his keeper Edward. Carlo seemed O.K. for about half an hour and then got very aggressive.

(3) Group 5, Carlo and Edward were talking about their work. Edward was making suggestions and Carlo writing them down—later having an argument about a sentence at the end. Carlo very reluctant to change it. Edward, in rather a nice way pointing out they could improve it. Edward feeding spellings—sometimes Carlo getting it right himself. The time span was too great for him.

TN2 collaboration—benefits and drawbacks	Comment: really worried about Carlo. This didn’t sound too bad, but he’s a disruptive force. Edward’s role seems very helpful, but what does he gain from it? Looking forward to Carlo and Edward working on the computer—maybe a pity I have left them out of the first four groups.
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(4) Group 6, girls at the front, in their stride—wrote a lot, didn’t put down their pens—a marked difference from the beginning of the lesson when Susan felt they weren’t very interested.

MN2 reliability of data? TN3 effects of computer on my role	Comment: sounds good, but what were they writing? I neglected this group—problem when the computer is in the room is that I am concentrating my attention mainly on the children working on it. How can I guard against this? Maybe I can’t until I am more used to it.
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- (5) Didn't watch Group 3 because every time she had a look they were doing very nicely—they didn't move much—whereas other children moving round the room quite a bit. I suggested that movement was to do with groups using the computer—no need for Group 3 to move as they were all sitting near the computer, anyway. Susan agreed—they could communicate with whoever was at the keyboard—yes.
- TN4 movement related to computer use Comment: using a computer for collaborative writing necessitates movement between those writing on the computer and other members of the group back at the table. Movement, discussion and noise are therefore consequences of collaboration. To reduce movement and noise it may be best to place the computer in the middle of the room and seat the groups at surrounding tables—would need an extension cable for the computer.
- December 10 ☑ —I think I'll try this.
- (6) Group 4 were working well, too—though there was a difference of opinion. Fiona got really uncooperative. She stormed back from the computer and said, "That Caroline, she's been there for such a long time—she's messing about with commas that we can deal with when we get the print out. She should be getting the story into the computer." She was very irritated—she lost her stride after that—near the end of the lesson so it didn't matter too much, but she was extremely put out.
- TN5 collaboration—raising tensions Comment: Really worrying that there seem to be these arguments. Billy's behavior is part of the same pattern, I think (there's actually been some racial taunting between him and the others in his group, who are from India, China, and Israel). Working with the computer seems to be raising greater tensions. Why? Is it the way I've set up the work ... or is it because they are all so highly motivated? If it's the latter then maybe they are all trying much harder than usual to keep some ownership of the task—so they are really trying to collaborate instead of portioning out bits of the task with differential levels of ownership and responsibility. Co-operating in collaborative group work requires specific social skills—should these be taught? Heavens, I find collaborative writing difficult myself! Maybe tensions within groups are inevitable, but deliberate teaching might make them more aware of the need to work together and of tendencies of group members to dominate or to withdraw. How can I do that? Perhaps it would be good to hold a class discussion about the way they are managing their groupwork.
- November 21 ☑ I need to understand better the way the groups are organizing themselves—I'll try to fix up five-minute interviews with every child in group 1–4 at the end of this first two weeks of writing on the computer.
-

Re-reading the research journal

In daily life, any writing will usually be re-read afterwards, which results in the discovery of mistakes (and, of course, treasures), and many things become clearer. While re-reading, it is much easier for you to judge which things are important and which are not so important than it is at the time of your writing. You can discover new relationships between ideas and often some new insights that should be followed up. Questions emerge and it is easy to see what still needs to be done. Often it is possible to see how the thoughts expressed in the text could be usefully restructured.

Similar things happen if a memo is re-read or analyzed. Analysis in research is a kind of re-reading of existing data with the intention of re-organizing, interpreting, and evaluating them with respect to your research interest (see Chapter 6). Although it might be tempting to see this as a reason to write the research journal using a digital device, an important part of analysis is seeing the original text with emendations. Therefore, if you do use one, make sure that you keep both the original text and your revisions, and distinguish between them with different fonts, colors, or brackets.

Bridget, in the example above, re-read her journal and put in analytical comments that we refer to as theoretical notes, methodological notes, and planning notes.

- *Theoretical notes* are used to put forward explanations relevant to the research question or issue being investigated. They identify relationships between events and note them for further research.
- *Methodological notes* are used to record your reflections on the research methods that you used. Ideas for alternative methods and procedures are noted to help develop your own competence as a researcher.
- *Planning notes* are used to record new ideas for the improvement of practical action that emerge as you write or re-read your journal. For example, you may remember things that you wanted to try out some time ago, or flashes of thoughts from the last lesson that you may have forgotten.

We now look at each of these types of notes in more detail.

Suggestions for theoretical notes (TNs)

Research is more than collecting data. It is also about making connections between data and understanding them. When you reflect on data various ideas come to mind. TNs in a research journal try to capture these ideas and save them from oblivion. Sometimes they are an integral part of memos as in our example from Bridget's journal: she marked the TNs with the symbol TN and with a key term or label, which indicates the

main theoretical idea for subsequent analysis. Ideas for TNs also emerge while analyzing data, while thinking or talking about your research plans, or as sudden flashes of understanding on the way to work.

There are a number of purposes for which writing TNs is useful. These include:

- clarifying a concept or an idea (see TN2 in Bridget's journal);
- making connections between various accounts and other bits of information (TN5);
- identifying surprising or puzzling situations worth following up later (TN5);
- connecting your own experience to the concepts of an existing theory (TN1);
- formulating a new hypothesis (TN4); and
- realizing hitherto unconscious assumptions and formulating their theoretical implications (TN3).

For practical purposes in making TNs we suggest you might:

- Date each TN and give it a label or key term indicating its content (see the examples in Bridget's journal extract).
- Clarify the relationship between a TN and the data to which it relates. If necessary, the relationship may be qualified (for example, by writing "uncertain," "examine"); and cross-references to other TNs and data may be added.
- Prioritize the writing of TNs over other research activities (such as observation, documentation, or formal analysis). Whenever you have an idea for a TN, other activities should be interrupted to record it in as uncensored a form as possible—even if it sounds rather fantastic or daring. These ideas may turn out to be keys to understanding the issue being researched.

Suggestions for methodological notes (MNs)

MNs record the researcher's self-observation when doing research. As with TNs, sometimes they can be an integral part of the journal entry and sometimes may be added later as part of preliminary analysis. For example, they might address these questions:

- What were the circumstances in which I used particular research methods? (see "MN1" in the example from Bridget's journal).
- What role did I play in the situation under investigation?
- What comments arise from my experience of specific research methods and strategies? (MN2).

- What decisions did I take about the future course of my research, and why?
- What conflicts and ethical dilemmas did I encounter and how did I deal with them?

While research on the research process itself might seem too complicated and self-indulgent, in moderation there are good reasons for making MNs. First, action research does not claim to produce unambiguous results regardless of the context. Therefore, it is important to reflect on research methods while doing research, and to build up a stock of methodological knowledge that action researchers can draw upon in future investigations. Second, documenting and reflecting on methodology while carrying out action research may be of particular importance for other people working in your field. Such records provide them with knowledge and practical examples, which are useful when working with other teachers, nurses, or social workers who want to reflect on and improve their practice. Third, by paying attention to how you do research, you improve your research skills as you proceed through mini-action research cycles (see “MN1” in Bridget’s journal).

Suggestions for writing planning notes

When writing memos and reflecting on data we often “automatically” generate ideas about, for example:

- alternative courses of practical action,
- how to do it next time,
- what was forgotten this time and must definitely be made up for in the next lesson,
- what has to be thought through more carefully, and
- what additional information seems essential and needs to be gathered.

Writing down planning notes in your research journal makes more systematic use of the stream of ideas that, as we all know, go as quickly as they come. It provides us with a way to remember the plans that we want to put into practice at some later date. At the same time, it facilitates the shaping of a plan by recording the context of the original aspirations and thus helping us to keep its purposes clear in the course of development. Some practical suggestions for writing planning notes are:

- As in everyday life, you should not make too many plans. Plans that are not put into practice often induce feelings of frustration and failure. On the other hand, you should not suppress evolving ideas too early just because they seem “unrealistic” (see also Chapter 7).

- We mark plans by the symbol □ in the margin (see Bridget's journal). A date may be added to the □ if planned activities have to take place at a specific time. You can check it when you have carried out a plan (☑, see the example in Bridget's journal). In this way you can quickly see which plans you have completed and which still need to be put into practice.

In-depth reflections

Much of your journal will consist of the memos that we have discussed previously in this chapter. We also encourage you to include entries that are the result of in-depth reflections that draw on a range of experiences over an extended period of time, rather than focusing on a specific situation.

In-depth reflection and other creative-introspective methods are important ways for action researchers to gain access to and reach an understanding of their tacit knowledge, which is the result of our experience but, normally, not directly and consciously at our disposal (see further discussion of this in Chapter 10). Writing in journals and the use of other methods and strategies (Ms) described in this book can help to make explicit our tacit knowledge. These methods may also be particularly helpful for exploring recurring situations that are problematic in any way, for example:

- situations that occur frequently but that you do not fully understand;
- situations that end up in problems and conflict again and again;
- situations that you repeatedly feel uneasy about although no obvious conflicts surface, for example, dilemmas, ethical uncertainties, difficult decisions, and "vicious circles" in which you feel trapped into behaving in a particular way (see further discussion of this in Chapter 6); and
- problems with pupils, patients, or clients that do not seem to have any logical reason.

In-depth reflections in journal entries can contain descriptive and interpretive sections, just like memos. Since these reflections usually refer to longer time-spans, the descriptive element is sometimes neglected, but you should be aware of the danger of losing touch with reality if you allow your thoughts to range too widely. Therefore, it is important to link passages of in-depth reflection with their roots in events and actions.

Research notebook extract illustrating in-depth reflection

To illustrate in-depth reflection we include here an extract from a particularly ingenious example. A teacher of a special education class, for pupils

with learning difficulties, used this method to explore her experiences during breaks between lessons (Bergk, 1987). Once again, while reading it, we suggest that you keep a check on how this example relates to the points we have made above.

In particular, my twelve students' ways of modifying closeness and distance—both among themselves and towards me—during the breaks inspired me with some ideas of how to do them (and myself) more justice in the classroom. Using (one child) as an example to illustrate what I mean, I will not describe persons and situations but what was impressed on me through my observations: perceptions and subjective images influenced as much by my will to see and learn as by what was really taking place.

I have used the following procedures to reproduce these images as authentically as possible:

- 1 *When thinking of one particular child I display my associations in the form of "clusters." These serve as a starting point for the next steps (although not every idea is followed up).*
- 2 *I sketch some impressions of a typical situation during breaks in which this particular child was involved.*
- 3 *In doing so I reconstruct my part in these situations as far as I am conscious of it.*
- 4 *Comparisons with the situation during lessons then indicate starting points for improvement that emerge from the observations during breaks.*
- 5 *Finally, I roughly describe the development in the course of the school year and, in particular, my reflections on the observations in order to learn from them.*

Winfried: a distorted mirror image of myself

(an example of my method)

1 **Associations (see Figure 2.1)**

2 **Behavior in breaks**

Winfried occupies the center and smiles, beamingly. Smaller children cling to him, drag him around. He laughs: "You will tear me to pieces!" Like a mother whose children are tugging at her. His peers struggle for his attention. He distributes it equally in the circle around him, provides judgments and laughs at somebody fooling about in front of him. What he says, counts. He is a source of tranquility—amid all the ado around him. Apparently, he has nothing to do with it. And yet, it arises from the competition for his attention.

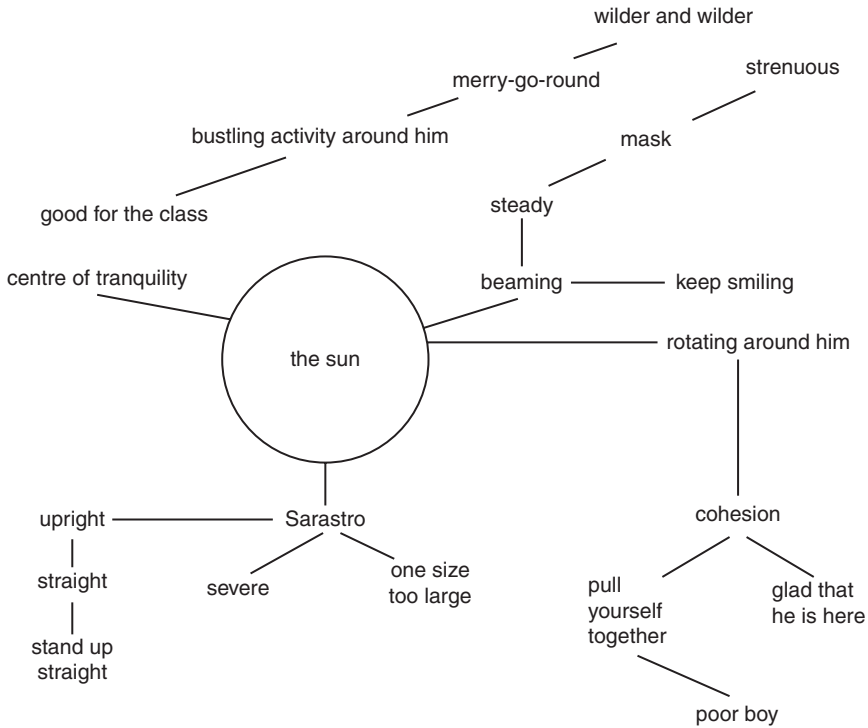


Figure 2.1 Bergk's cluster.

3 My part

In addition to that, I put him on a throne. It is so comfortable. If I want to re-establish discipline I merely need to express my displeasure by standing close to Winfried. He will immediately reprimand his classmates in an appropriate manner. The wrongdoer is embarrassed, the case is settled. "I'm glad that he is here!" comes to my mind again and again. But it is also a strain on him. He is tugged to and fro, not only physically. Sometimes his smiles go in all directions and seem to be a mask. This is linked with a certain aloofness from the others. He is there for everybody, but would he also be able to cling to anybody who is there for him?

I notice the similarity with my own role. Do the right thing and be available for everybody! That is what I always have to do—and it is a strain.

4 Comparison with the situation during the lesson

Winfried rarely starts any disruption. But many children want to talk to him or show something to him during the lesson. This interferes with my plans when I want to talk or show the class something. It is a repetition of

the situation during break—only this time I don't like it. Again, Winfried is under strain as a result. He cannot concentrate on his own writing, picture, or math problem. Therefore he is slow. His neighbors, competing for his favor during the breaks, surpass him during the lessons and even prevent him from catching up when he falls behind. Winfried really grieves about his learning difficulties. On two occasions I found him shedding silent tears.

5 Development in the course of the school year

Winfried clearly demonstrated a typical teacher's problem to me by adopting parts of my role: being the authority who judges and evaluates is exhausting and produces unrest all around. His peers sucked assurance out of Winfried that—had their self-confidence been greater—they could have gained more efficiently from their own work, self-reflection and self-appraisal. I could support Winfried best by helping all the students to develop more independence in their learning (...). If I stepped down from my judge's or master's throne and furnished all the children with spacious master's seats, Winfried could also leave his throne and take a position among the others.

At first it was difficult. The children's minds were set on hierarchical structures and teacher-oriented instruction. Winfried sat in the center of the first row, appropriate to his "task" as "co-teacher" and "mother." At first, my attempts at pair and group work failed because the younger ones, in particular, did not accept each other as "partners" but sought feedback from Winfried. Only as the groups became more independent and I removed him physically from the center stage, did Winfried calm down slowly ... and so did I.

Getting started

Familiarity with action research can develop in various ways: you can read about practical methods and theories—or you can study what other practitioners actually did in order to reflect on and improve their practice. The wealth of examples in this book as well as collections of action research case studies may enable you to do this. However, the royal road to action research is to explore it by doing it yourself. Thus, the most meaningful way of reading this book would certainly be to exploit it as a reservoir of tools and ideas, and test its usefulness, while reflecting on and developing some issue from your own practice.

Among the descriptions of *methods and strategies* some act as *Starters* (M2.1, M2.2, M2.3, M2.4, and M4.9). These are particularly useful as ways of getting started on research. They arose from our experience in in-service courses, university workshop-conferences, and innovative projects. We realized that teachers and other practitioners, overwhelmed by the complex aim of researching, developing, and documenting an aspect of

their own practice, often did not easily find a worthwhile starting point for their work. Often they needed specific suggestions of ways to get started. Because of their preoccupation with their grand aim, they were unable to begin their research and find small-scale progress rewarding. However, our experience also tells us that action research does not lend itself to precise pre-planning. On the contrary, every action researcher must find his or her path according to the specific research question and the particular working situation. There are specific methods and approaches from which to choose, but these need to be selected and tailored by the individual. Too many tasks, too precisely defined, hamper the development of an individual research path and press action researchers onto a generalized course of research that often does not fit the particularities of the situation. Our suggestions try to balance these extremes.

The Starters are intended as “suggestions:” they attempt to formulate some ideas and recommendations about how to approach the complex task of researching your own practice. You should use these recommendations to get you started. As soon as you have found your own way, which will be bound to deviate from the suggestions, you may confidently abandon those ideas that are no longer helpful. Just as Lawrence Stenhouse (1975) claimed for all curricula, recommendations are, at best, intelligent proposals that have to be tested and developed by reflective practice.

We assume that different and original methodological patterns will develop as your research progresses and you engage in mini-action research cycles. Thus, you will find some Starters proposing small research activities at the beginning of the book.

M2.1 Research journal

Use a *research journal* during the whole course of your research. We recommend a notebook, with large margins, at least 40 pages in length. You can record here all your observations and experiences during your research. Every idea or reflection that comes to your mind in connection with research activities—be it positive, ambivalent, negative, or simply yet unclear—could be important for your subsequent work and provide a starting point for development and improvement. Jotting down all experiences, striking events, and ideas in your journal means preventing valuable information from being lost in the further course of project work.

A journal develops into a valuable research method only if it is used regularly. If you notice that there has been no single entry in your journal for a full working week, check:

- whether you can reserve a period of time during the week that is relatively free of disruption and
- whether journals really fit your research plans.

However, remember that difficulties are bound to occur with something new (and, according to our experience, they are particularly frequent for novices in journal writing). Don't be discouraged too quickly. Don't forget to make use of the suggestions for journal entries contained in the whole of this chapter.

Our second Starter results from our experience that it is often frustrating to wait too long to see the first research activity materialize. We recommend embarking on a small research activity even before you have begun to formulate a starting point for your research—to warm up your research muscles, as it were. This helps you start the journal and gives you the feeling that something has been achieved. You have begun your research even though it is not yet focused on a specific issue for reflection and improvement. As a bonus, such small exercises—even if they seem to be selected at random—sometimes point the way to an issue that becomes the starting point for further research. These exercises shouldn't be thought of as being distinct from your action research but are instead examples of what we are calling “mini-action research cycles.”

M2.2 The slice of life

Another way to “jump start” your research is by writing a “slice of life” (Tremmel, 1993). A slice of life is an informal, two-part piece of writing.

- The first part is a *detailed narrative of an event* that occurred in your practice. The event should be of relatively short duration. For a teacher, that might mean something that happened during one class on a particular day. It should be as detailed as you can make it but keep your story to no more than two pages. This should help to keep the narrative portion of the slice of life as low on the “ladder of inference” (see M5.1) as possible.
- The second part of the slice of life is a *reflection* on the first part. While your reflection can be analytical, you should also record your feelings that arose during the event as well as any new understanding or feelings that arise from writing the narrative and then reading it.

If at all possible you might share your slice of life with others, either members of your collaborative action research group or a critical friend (see M4.7).

M2.3 Exercise to warm up your research muscles

If you have not yet definitely decided on your research issue ("this is what I am going to study and nothing else!") we suggest that you carry out *one* of the following five exercises:

- Select one of next week's lessons. Write a memo about the course of events in your journal. Include all thoughts that come to your mind during reflecting and writing.
- Record one of next week's lessons. Select five minutes of the recording for transcription (see M5.8 if you need help for this activity). Leave a margin for comments beside your transcription. Then, note in the margin all associations that come to your mind when reading specific sections of the transcript (it is not the "correct" interpretation of the event that is at stake—allow every association).
- Prepare a *cluster* of all associations that come to your mind when you think of the phrase "Being a teacher," "Being a nurse," "Being a social worker," etc. (for a description of the "clustering procedure" see M2.4).
- Every day next week cut out from a newspaper some words, phrases, or pictures that you intuitively like or that you spontaneously feel concern your profession. At the end of the week prepare a *collage* from the cuttings. Feel free to complement the collage by hand-written words and your own drawings (see Figure 2.2 for an example).
- Imagine an extraterrestrial visitor entering your classroom (or your personal workroom) from the top left corner without being noticed by anybody in the room: Describe in a short piece of writing what he or she would see and think.

To close this warm-up exercise we suggest:

- If you are working on your own: read what you produced again after a few days. Add a sentence that concisely expresses the impression you have when re-reading your own writing.



Figure 2.2 Collage made for M2.3 by Katie Laux, University of South Florida.

- If you are collaborating in a group: what you produced might be read to the group. However, sharing should always be voluntary. Alternatively, you could report back on the exercise in a few sentences. Other group members might ask questions but should refrain from making comments and putting forward interpretations. (For further ideas on this, see also the analytic discourse method in M4.6).

M2.4 In-depth reflection

In-depth reflection is an opportunity to think through your own actions and make your “tacit knowledge” accessible to yourself (see Chapter 10). The following procedure, known as “clustering” (Rico, 2004), provides one way of starting this process.

- The procedure of clustering begins with a *core word* (or *phrase*) that is written in the center of a blank sheet. For example, a possible core phrase might be “Being a teacher,” “Being a nurse,” or “Being a social worker.” Other stimuli may be used in a similar way: a situation that has been of concern to you for some time, a picture, some writing, a dream, a piece of music, etc.
- Note down all associations to this core word as *word-chains*. These start from the central concept and display your associations in

various (linear or branched) graphic arrangements. A core word plus word-chains is called a *cluster*.

- When you have noted down the most important associations, the next step is to switch over mentally from the flow of associative images to the recognition and systematization of patterns. Let the cluster inspire you, and use its elements as the basis for some writing. This writing might either be rather prosaic or emphasize creative elements—just as you feel (see sections (2)–(5) in Bergk's example).
- Later on, you might do some editing of the text. You might also read it to others (colleagues, family) and discuss it.

M2.5 Rainer's techniques for journal writing

Tristine Rainer's book *The New Diary* (1978) was based in part on a workshop that she developed and taught with Anaïs Nin (Nin was known for the journals that she kept for more than 60 years, for example, Nin, 1966). In that book she suggested seven techniques for journal writing. They are:

- *Lists*. In this technique the journal writer makes a list. The list could be a set of things to do, planned activities, ideas, or feelings, among others. It could also be a list of events that the journal writer could go back to and fill in the details of what happened to create a narrative account. Figure 2.3 shows how Janine Hall responded to this M.
- *Portraits*. Sara Lawrence-Lightfoot originated and popularized the use of portraiture in qualitative research (see Lawrence-Lightfoot & Davis, 1997, and <http://www.saralawrencelightfoot.com>). Lightfoot described portraiture in this way:

"With portraiture, I seek to combine systematic, empirical description with aesthetic expression, blending art and science, humanistic sensibilities and scientific rigor. The portraits are designed to capture the richness, complexity, and dimensionality of human experience in social and cultural context, conveying the perspectives of the people who are negotiating those experiences" (Lightfoot, 2016).

The goal of portraiture is to prepare a portrait or story of a person or an institution. When it is of a person, it is based on dialogue

What is a principal?

Confident	Talent Developer
Helpful	Strong
Caring	Child advocate
Organized	Fighter
Servant leadership	Teacher
Distributive leadership	Strong Communicator
People before tasks	Facilitator
Child oriented Professional Manager	Problem Solver
Leader	Think Win-Win
Curriculum Expert	Sense of Humor
Teaching Expert Safety	Professional Positive
Conscious	Think Outside the box

For the purpose of this M I jotted down this list in a notebook that I keep daily “to do” lists in and I went back a day later to reflect on the list and type it up for submission. As I reflected back on my journal entry of, “What is a principal?” I noticed that my random list contained several categories:

<u>Traits</u>	<u>Roles</u>	<u>Important Aspects of Leadership</u>
Strong	Manager	Strong communicator
Confident	Leader	Facilitator
Helpful	Curriculum expert	Problem solver
Caring	Talent developer	Think win-win
Organized	Child advocate	Sense of humor
Professional	Teacher	Safety conscious
Positive	Fighter	Servant leadership
	Teaching expert	Distributive leadership
		Think outside the box
		People before tasks

I also noticed that I had left off a few roles that I feel are very important to the topic of “What is a Principal?”. I have noted those below. I feel certain that if I return to this list in a day or two, I will add other points I did not catch the first or second time I reviewed the list.

Additional Roles:

Motivator
Analyst
Financial Manager
Evaluator

If I were to ask someone else to review this list and tell me what kind of a principal would look for these types of traits and roles they would say this principal is an advocate for both her staff and her students. She is focused and tough but also caring and someone who seeks to keep an open line of communication. This leader is goal oriented and strives for everyone to come away feeling satisfied. They would also note that this principal values teaching, cares about student success and is not afraid to confront issues.

Figure 2.3 List made for M2.5 by Janine Hall, University of South Florida.

between the writer and the research participant (or multiple participants if it is of an institution). The data for the portrait are usually collected through in-depth interviews or observations.

- *Maps of consciousness.* This technique is similar to clustering described in M2.4 and concept maps. Rainer suggests using stick figures, lines, or shapeless blobs, rather than trying to include artistic flourishes as a way to free up one’s thoughts.

- *Guided imagery.* Guided imagery is a technique that is being used more often these days as a way to relax and meditate to improve one's mental and physical health. As a technique for journal writing, it consists of engaging in structured daydreaming about some aspect of your practice, which you would then record.
- *Altered point of view.* In this technique, the writer looks at his or her practice situation from a different perspective, such as the example of imagining what an extraterrestrial would see when visiting your workplace (M2.3).
- *Unsent letters.* There is nothing new about the idea of structuring a journal entry as a letter. After all, isn't the opening "Dear diary" a customary way to begin an entry? In this technique, Rainer suggests addressing the letter to an actual person, possibly one of the participants in your study or your critical friend.
- *Dialogues.* An entry that is an unsent letter has one voice—that of the sender. In a dialogue entry, there are at least two voices engaging with one another. To Progoff (1992), the dialogue can be between the journal writer and a colleague, a participant, your inner self, or even an inanimate object. The journal writer can construct both sides of the dialogue, or the journal entry can be configured as a dialogue journal, in which two or more people engage in exchanges as part of the one entry. The latter is facilitated by the use of computers or other digital devices for the exchange of email or the use of an online productivity app.

You can find additional information about these types of techniques in other books, such as *Learning Journals: A Handbook for Reflective Practice and Professional Development* (Moon, 1990).

Notes

- 1 Quotations from German sources have been translated by the authors.
- 2 In Chapter 5, we discuss other ethical issues in action research.

Collaborating with others

Until this point we could interpret professional action as reflected individual action. However, in Chapter 1, we claimed that *the long-term aspiration of action research is always a collaborative one*. In many action research projects, groups of practitioners are involved in research and development. *Embedding individual research in a professional community* is supported by the following arguments:

- Facilitation of research—groups provide a social context for discussion on design, steps, and results of research, and offer mutual support. They can also provide concrete assistance in specific phases of the research (for example, in interviewing participants).
- Dissemination of knowledge—it is an important aim of action research to encourage practitioners to disseminate their experiences, concepts, and results to contribute to a shared knowledge base of the profession (see Chapter 8). The cooperative exchange in a group of practitioners is a first step in disseminating knowledge to the profession. Presenting experiences, case studies, and ideas in a familiar group can be a good preparation for presentations to a larger professional community.
- Development of a professional community—the critical as well as friendly cooperation in a collegial group can initiate steps toward the building of a professional community. This is an indispensable condition for high-quality work in the profession.
- A critical authority—the community of practitioners can be seen as analogous to the scientific community. The final criterion for the scientific character and acceptability of research results is for Thomas Kuhn (1996) a social-historical one: research results and the strategies behind them have to stand the test of critical discussion in a professional community. In collegial discussion, action researchers have an opportunity to become conscious of possible misinterpretations, alternatives, and strengths of their work (Capobianco & Feldman, 2006).

Researchers have found a number of positive outcomes to collaboration among practitioners as they engage in action research. Among them are that it can enhance creative potential, stimulate abilities to investigate their situations, and mobilize human resources to solve problems (Pine, 1981). Calhoun (1994a), in her work on whole school action research, which we discuss later in this chapter, argues that collaboration among teachers can revitalize the entire learning community. Butt, Townsend, and Raymond (1990, p. 7) found that when teachers work collaboratively researching their practice, the interaction with peers as they engage in the processes of action research together results in a synergistic effect as a result of “being in the same (experiential) boat and sharing a common purpose ... and positive interpersonal support and mutual affirmation as they pursue common goals.” Paul Bryant summarized these positive effects in this way:

An additional advantage of collaborative action research is that contexts that enable teachers to collaborate in solving common problems in a focused way appear to enhance teachers’ own individual efforts at development ... By their voluntary, self-initiated nature, these activities encourage individual and collective teacher ownership. The mutual interests, trust, and support that develop within groups appear to provide the encouraging environment necessary for taking individual and collective risks. A collective commitment and challenge provokes and requires action, and the collective climate that develops also supports and promotes that action.

(Bryant, 1995, p. 16)

The professional community is therefore an important location for reflection, further development, and learning of practitioners. Professional learning is not only an individual process nor an intellectual or practical further development alone; it can also lead to the feeling of being at home and challenged at the same time in a social community. Lave and Wenger’s theory of situated learning (1991)¹ can make the importance of the social regard for professional action and learning still clearer (Altrichter, 2005). This theory emphasizes the following *characteristics of learning processes*:

- Learning is getting involved in the world—learning is action, a form of being in the social world and not only a way of accumulating knowledge about it.
- Learning is situated—learning is involvement in specific social situations. It draws on them and is bound to them in a certain sense.
- Learning occurs in and through communities of practice—the primary locus of learning is not the individual mind but processes of co-participation in a community of practice. Primary actors are not individual persons but a community.

- Learning occurs in socially structured situations—being socially situated, learning necessarily involves controversial interests. The social structure of practice, its power relations, and its conditions for legitimacy define the potentials for learning.
- Learning is forming identity in communities of practice—the acquisition of competence is associated with development of identity (in and through the membership in a community of practice). Both elements—learning of skills and development of identity—are part of one and the same process. Without participation there is no basis for identity—persons and communities constitute each other.
- Learning occurs in communities of practice through “legitimate peripheral participation” (Lave & Wenger, 1991); for this to happen,
 - learners must participate in a practice;
 - learners must be allowed to play at least a peripheral role—at least temporarily. In such a role, the pressure to act is reduced in favor of a cognitive and emotional distance to the immediateness of practice.
 - learners’ practice must be accepted as being a legitimate form of practice within the profession.

The value of action-oriented knowledge is dependent on a community of practice—professional knowledge is situated and makes sense only in the specific contexts of the community of practice. Therefore, knowledge is embedded in communities of practice.

A community of practice is an intrinsic condition for the existence of knowledge, not least because it provides the interpretative support necessary for making sense of its heritage. Thus, participation in the cultural practice in which any knowledge exists is an epistemological principle of learning.

(Lave & Wenger, 1991, p. 98)

Although there are many different ways that practitioners can collaborate among themselves or with their students, clients, or patients, they can be grouped in three ways: working with a collaborative friend, collaborating with research participants, or collaborating with peers. We give a brief introduction to the first two, and then provide detailed examples of the latter.

Collaborating with your critical friend

A critical friend is someone who has empathy for your research situation and can relate closely to your concerns. At the same time, he or she is able to provide you with rich and honest feedback.

When you invite an outsider to support you in collecting data about your practice, good communication is important. The partnership might begin with a preliminary conversation so that you can explain the starting point for the research and some of the initial insights. The next step would be to talk over ideas for the first stages of the research. This not only helps your critical friend to get a clearer picture of your concerns, but also helps you to clarify ideas by talking them through. We have found that students and novices across the professions can make good critical friends if the partnership is properly established through this kind of discussion and takes place in a relaxed environment.

It is also possible to work with critical friends when you have a group of people doing action research together. As we have shown above, a small team of action researchers will create better conditions for action research than a person working alone. The group can form research tandems. The partners in each tandem have their own starting points for research but assist each other as critical friends, sharing experiences and helping with data collection, analysis, and the development and implementation of action plans.

Collaborating with research participants

Professionals have everything to gain by including clients and other stakeholders in their action research activities. For example, Baker, Cook, and Repper (1986) did research on group work with “able” and “less able” pupils. They used a video camera to collect data and then discussed the recording with both groups of pupils. Here are some results from the teachers’ point of view:

- The self-confidence of the less able pupils increased.
- When some pupils saw on the video that they did not ask any questions, they changed their behavior.
- The teachers were made aware that as the self-confidence of the more able pupils increased and they contributed more in discussions they received even more attention than before, whereas less able pupils gradually received less attention because their participation did not improve to the same extent.

The first two results probably could not have come about if the pupils had not been involved in the research process.

Another aspect of action research is stressed by Jinny Hay, Prevention Strategy Manager for Essex County Council Social Services in the UK: she emphasizes the “collaborative nature of the approach to solving a practice dilemma when the question has been agreed by all participants who want to learn from and with each other and change the way that they work”

(personal communication). Action research “offers a different approach to a ‘live’ problem by involving those people whose problem it is and who want to do something about it to improve the way they work” (personal communication) (see also Hay, 2002).

Participatory action research (PAR) is another way that professionals and research participants collaborate to improve social, economic, educational, and political situations. Most forms of PAR are connected in some way to critical theory or any of the other critical stances, such as feminist theory, critical race theory, and queer theory (McTaggart, Nixon, & Kemmis, 2017; Peralta & Murphy, 2016). McTaggart et al. (2017) discuss the characteristics of critical PAR in their chapter in the *Palgrave International Handbook of Action Research* (Rowell, Bruce, Shosh, & Riel, 2017). To McTaggart et al. (2017), participation in PAR “means being a participant in the work or life going on in a local situation and also being a participant in the research process” (p. 25). Participants in PAR agree to collaborate on issues, concerns, or problems that arise in their practice, or in the life of their community, in order to understand how their situations are constrained or enabled by either outside forces or their own efforts, and ultimately to change their individual and collective practices. For McTaggart et al. (2017), the participation takes place in what they call a “public sphere.” In their chapter, they provide ten features of public spheres, many of which are similar to the characteristics of a community of practice (Lave & Wenger, 1991; Wenger, 1998; Wenger-Trayner & Wenger-Trayner, 2015). The main differences are related to issues of social justice and critical theory. For example, McTaggart et al. (2017) state that issues arise due to legitimization deficits, which is when the “legitimacy of plans, proposals, policies, or laws, or about the legitimacy of people’s practices, or about the legitimacy of the conditions under which people work” (p. 23) is questioned or negated by outsiders or themselves. In addition, public spheres are often connected with social movements, and therefore affect social systems indirectly, through community pressure, for example, rather than direct political action. As a result, people engaged in PAR “aim to generate a sense that alternative ways of doing things are possible and feasible—and show how to resolve problems, overcome dissatisfactions, or address issues” (p. 25).

Collaborating with peers

We use the term collaborative action research (CAR) when several practitioners collaborate in their research by sharing experiences and discussing outcomes, though not necessarily sharing the same focus. This is the typical situation in an action research group. As with working along with a critical friend, the more that members of your CAR group know about your situation and your research, the more they can help you in

clarifying ideas, developing research plans, and identifying action strategies. While PAR could be conceived as a form of CAR, we believe that it is important to distinguish between them because PAR tends to focus on issues of communities with community members being the researchers and participants, while CAR focuses on the needs of professionals and practitioners, who are the researchers and participants. It is also important for us to distinguish between another use of the term collaborative research in which an outsider, usually an academician, has a practitioner who helps the academician study the work of the practitioner or his or her practice situation. We believe that this type of arrangement can in some ways be the antithesis of action research because of its implicit hierarchy (Feldman, 1993a).

We now turn to some of the ways that action research groups have been constituted in order to nurture, support, and take advantage of collaboration. They include enhanced normal practice (ENP) through long and serious conversations (Feldman, 1996, 1999); journal clubs (Tallman, 2014; Tallman & Feldman, 2016); lesson and learning studies (Fernandez & Yoshida, 2012; Marton & Runesson, 2015); and whole school or institution-wide action research (Calhoun, 2002; Murphy & Lick, 2005). Each of these types of CAR can be thought of as taking place in a community of practice.

Enhanced normal practice

In Chapter 1, we described how Allan facilitated a group of physics teachers in CAR. His work with the teachers and how they learned to improve their practice was the focus of his dissertation study (Feldman, 1993b). In his analysis of their group interactions, he saw a pattern of interactions that he called enhanced normal practice (ENP). He came up with this term as a result of his hearing this question from many teachers: “How is action research different from the normal practice of any good teacher?” By labeling it enhanced normal practice, he honored the good work that so many teachers do.

For two years, Allan met with the physics teachers about every few weeks during the academic year. In the first year he facilitated the group and in the second the teachers took turns being facilitators. During this time, Allan identified three different ways in which they engaged with each other as they made their practice problematic. He called them anecdote-sharing, the trying out of ideas, and systematic inquiry. An anecdote is “a narrative of a detached incident, or of a single event, told as being in itself interesting or striking” (*Oxford English Dictionary*, 1971). During the two hours that we would be together, the teachers would tell each other short stories about something interesting that had happened to them in their classes since they last met. In general, the other teachers

would respond in one of three ways. Often, they would tell another anecdote in response to the first one. Other times, they would ask questions that sought details about the teaching methods that were used. The third type of response was questions that were more critical in nature and asked why as well as what, where, how, and when. Anecdote-telling is therefore the “oral exchange and generation of knowledge and understanding by the recounting and questioning of some teaching event or explanation of one’s understanding to others” (Feldman, 1996, p. 521).

The sharing of anecdotes often resulted in the teachers trying out ideas that they got from each. Many of these arose directly out of their practice, but others came from outside of the group. For example, one of the teachers was a participant in a large-scale curriculum development project. Another engaged in educational activities with a national science laboratory. A third had recently completed his master’s degree in science education.

Their knowledge and understanding also increased by trying out for themselves what had been suggested by others. Many of these suggestions came from the other teachers in the group, but there were also many that came from the wider educational community, including that of educational research.

Journal clubs

When many practitioners first hear the term “journal club” they relate it to the strong emphasis on narratives in much of action research. However, journal clubs are not about journal writing—their focus is on the reading of research reports like journal articles that connect with their problems of practice. They serve two main purposes: (1) for practitioners to gain knowledge of research related to their field; and (2) to translate that research into improvements in their practice. In the journal clubs that have been used in medicine, nursing, and the sciences (Golde, 2007; Linzer, 1987; Newswander & Borrego, 2009; Seymour, Kinn, & Sutherland, 2003), their members discuss peer-reviewed research articles found in recent research journals. This is done by members of the journal club taking turns selecting an article that pertains directly to some problem in his or her practice. All members of the club read the article and then the one who selected it makes a brief presentation summarizing it and explaining how it relates to the problem identified in his or her practice, and poses some questions for discussion. In the ensuing discussion, the members critique the article to connect its findings to the problem, and to their own experience as practitioners.

More recently, Tallman and Feldman (2016) studied the use of journal clubs as a way for pre- and in-service teachers to improve their teaching practice. They found that the journal club had the characteristics of a

community of practice in which the teachers mutually engaged in the joint enterprise of reading, critiquing, and understanding the research studies in order to improve their practice. They did this by asking each other analytical questions that helped them to critique the research articles in light of their practical experiences in the classroom. By reading, presenting, and discussing research articles with other teachers it helped them to learn how to examine data both in the study and in their practice and connect it to their teaching situation.

M3.1 Engaging in a journal club

Karen Tallman, who is one of the originators of the use of journal clubs in teacher education (Tallman, 2014; Tallman & Feldman, 2016), has provided us with these suggested steps for establishing a journal club.

1st step: finding like-minded practitioners

Clearly, the first step in setting up a journal club is to find a group of practitioners who are interested in reading, analyzing, and discussing the research literature in relation to their practice. Because Tallman has seen that successful journal clubs ought to have the characteristics of a community of practice, the group needs to have a shared domain of interest, to want to engage in joint activities in which they share information and help one another, and to have a shared repertoire of resources that include experiences and ways of addressing recurring problems (Wenger-Trayner & Wenger-Trayner, 2015). This suggests that someone who wants to start a journal club needs to spend time and put in effort to get to know other practitioners so that he or she can encourage them to join the club.

2nd step: establishing operating procedures

The group should collaboratively decide on the guidelines that the club will follow. This may include identifying a facilitator who could serve as the “chair” of the meetings and help maintain communications among the members between meetings, including the distribution of the research articles. The group also needs to decide on the length and frequency of meetings, as well as the order in which they take turns presenting the articles. The members may also want to set guidelines to the type and/or focus of the articles selected. Typically, the focus would be some problem or dilemma of practice (Khan & Gee, 1999). An additional important feature of journal clubs

is deciding upon food and drinks and a schedule of who will bring food to meetings (Blumenfield, 1985).

3rd step: selecting relevant peer-reviewed articles

The selection of appropriate journal articles is a key factor in journal clubs (Nicolette, 2011). Many of the members of a journal club, depending on prior background, may be unfamiliar with peer-reviewed research articles even if they are avid readers of practitioner journals. Therefore, it is important that members of the journal club learn how to identify and search for articles in peer-reviewed journals (Tallman & Feldman, 2016). A key to making the articles relevant to the teachers' practice is to identify areas of concern in members' practice and for them to learn how to search for literature to aid in their problem solving (Khan & Gee, 1999; Turkel, Reidinger, Ferket, & Reno, 2005). If the facilitator is someone who has extensive knowledge of the literature, such as someone from a university, he or she could model how to search for a research article in recent peer-reviewed journals (Tallman & Feldman, 2016). An alternative approach is to have a list of relevant journals and establish a first meeting at a library with the help of a librarian (Glazer, 2000).

4th step: the discussion

There are primarily three roles that journal club members take on during meetings. One is that of presenter. The presenter is the leader of the discussion for the day. It is his or her job to read and analyze the article, and then at the meeting to present a short—no more than 15 minutes—presentation of it. The presentation should include the title, author, journal name, central question of the article, methods used to answer the article's question, findings, and conclusions (Nicolette, 2011). Having the facilitator model a presentation can be helpful (Glazer, 2000; Tallman & Feldman, 2016). The presenter also guides the following discussion by posing prepared questions, keeping it on topic, and making sure that everyone participates and contributes to the discussion (Kleinpell, 2002; Tallman, 2014).

The presenter could ask questions about how the article translated to the practice of the club members. They should be specific so they move the group toward problem solving, but not too narrow so that it stifles discussion. For example, the presenter could ask whether anyone had observed or engaged in the practices described in the article, and if so, to describe it. This is in contrast with a more general question like "Would someone like to comment on the article?"

5th step: formative evaluation of the journal club

Journal clubs are organic in nature and need formative information if they are to be useful to their members. Therefore, it is important to have feedback mechanisms to assess how well the journal club is functioning and how to improve it (Golde, 2007). Feedback can be gotten informally by making it part of discussion at journal club meetings, or more formally with interviews or surveys done on a regular basis. The methods for doing this and how to take action based on the feedback need to be part of the operational rules for the journal club.

Lesson studies and learning studies

Lesson studies and learning studies are similar ways for teachers to collaborate to improve their practice and their students' learning. They have become an international "movement" to improve the quality of teaching and learning. The World Association of Lesson Studies (<http://www.walsnet.org/>) provides a platform for research collaboration, mutual assistance, and information exchange. It is made up of educational researchers and teaching professionals and organizes international conferences. Since 2012 the *International Journal of Lesson and Learning Studies* (<http://www.emeraldinsight.com/journal/ijlls>) has been publishing case studies and theoretical contributions.

Lesson studies

Lesson studies are in Japan the most widespread form of professional development in the teaching profession (Fernandez & Yoshida, 2012). Groups of three to six teachers select an issue and prepare a lesson. One teacher teaches it to a group of students, including three "case pupils;" the others observe the case pupils and collect data. After the lesson data are discussed, another teacher of the group teaches an improved version of the lesson in another class. Again, the lesson is observed and analyzed afterwards. Often, a third cycle is added and the findings are written up and presented to other interested teachers (see Figure 3.1).

In order to facilitate the adoption of lesson studies by teachers, certain features have been emphasized to counteract the fear that teachers may become objects of negative judgments by their colleagues and to promote a climate of trust (Dudley, 2014a; Lee & Lim-Ratnam, 2014):

- The design of instruction is a joint task of the lesson study group and is not "owned" by the teacher teaching the class. If difficulties arise they are not individual but a problem of the whole group.

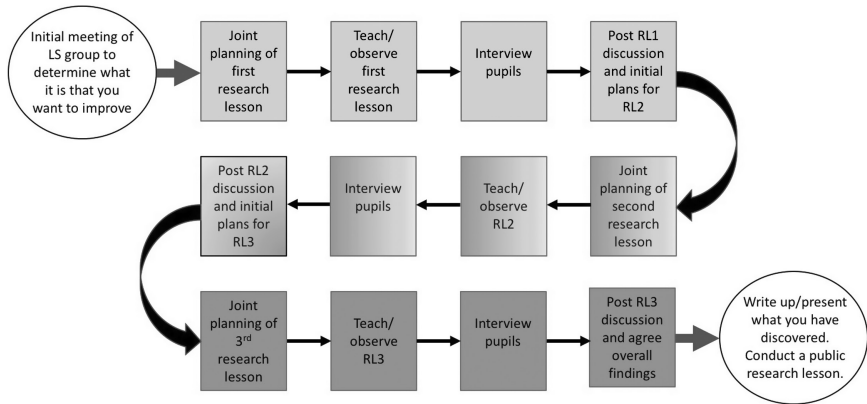


Figure 3.1 The lesson study cycle (Dudley, 2014b).

- The collection of data starts from jointly developed hypotheses with which observations and performance data are compared.
- The primary focus of data collection is on student learning (for example, on the three “case pupils”) and not on teaching activities.
- The most important criterion for the quality of a lesson study is the wealth of learning experiences that it conveys. A lesson study is regarded as a laboratory for joint research to contribute to the professional knowledge of teachers.

We encourage you to seek out the extensive literature on the use of lesson study and learning studies in teaching, for example, Peter Dudley’s accessible handbook on lesson study (2014b) available for download on the Lesson Study UK website. While most of the work has been done in school settings, we imagine that the same methods could be used to improve the practice of nurses, social workers, and other professionals.

M3.2 Designing a lesson study

A lesson study can be conceived as the six-step process described below or schematically in Figure 3.2.

1st step: planning the research lesson on the basis of school-wide goals

The goals that are usually targeted in lesson study are those related to the development of academic skills in students; however, they could also be broader dispositions toward learning, school, peers, and themselves, such as desire to learn, responsibility and initiative,

or autonomous thinking. The objectives of the research lesson should be related to these overarching goals (Lee & Lim-Ratnam, 2014).

2nd step: implementation and observation of instruction

One of the teachers of the lesson study group teaches the lesson and the others observe and collect data on the learning activities of a few selected students with different achievement levels (the so-called “case students”). In some instances, the instruction is also video or audio recorded for later analysis and discussion. As soon as possible after the lesson the case pupils should be interviewed. Dudley (2014b, p. 12) suggests the following questions:

- What did you enjoy most about that lesson?
- What did you learn? (What can you do now that you could not do before? What can you do better? How is it better?)
- What aspect of the teaching worked best for you?
- If the same lesson is being taught to another group what would you change? Why would you change that aspect?

3rd step: analysis and discussion of the observations and results

The observations and results are analyzed and exchanged in the group with a focus on student understanding. Dudley (2014b, pp. 14–15) suggests in his handbook that the post-lesson record should cover the following questions for each case pupil:

- What progress did each pupil make? Was this enough?
- What about others in the group of learners they typify?
- How did the technique being developed help or hinder? (Maybe a bit of both)
- What surprises were there?
- What aspect(s) of the teaching technique could be adjusted next time to improve the progress of each student?
- So, what should we try next time?

The lesson team then revises the instructional design of the lesson based on this discussion.

4th step: instruction on the basis of the revised design

Usually a different teacher teaches the revised design in another class. Again, selected students are observed by the participating

teachers and/or are interviewed after class. In some cases, other teachers are given the opportunity to observe an “Open Lesson” in this second cycle (Ermeling & Graff-Ermeling, 2014). There is usually a moderator for Open Lessons, such as a member of the middle management of the school.

5th step: renewed analysis and discussion of observations and results

As with the first cycle of lesson study, observations are analyzed and lead to further improvements of the instructional design. Although a lesson study could end after two cycles, O’Shea, Teague, Jordan, Lang, and Dudley (2015, p. 62) argue for three full lesson cycles, because they found that “the rewards from the second and even more so from the third research lesson are vastly greater and more impactful than those of the first research lesson.”

6th step: dissemination of experiences and findings

An important part of a lesson study is the dissemination of experiences and findings. They can have a variety of forms, including a structured discussion with colleagues, presentations (in a staff meeting), or publication of a case study in which not only the instructional design is made available, but also materials, objectives, motives, student performance data, and challenges met (Fernandez, Yoshida, Chokshi, & Cannon, 2001). In each year, some Japanese schools publish small pamphlets with lesson studies and their results for parents. In other schools, the results are exhibited in the form of displays in school corridors (O’Shea et al., 2015).

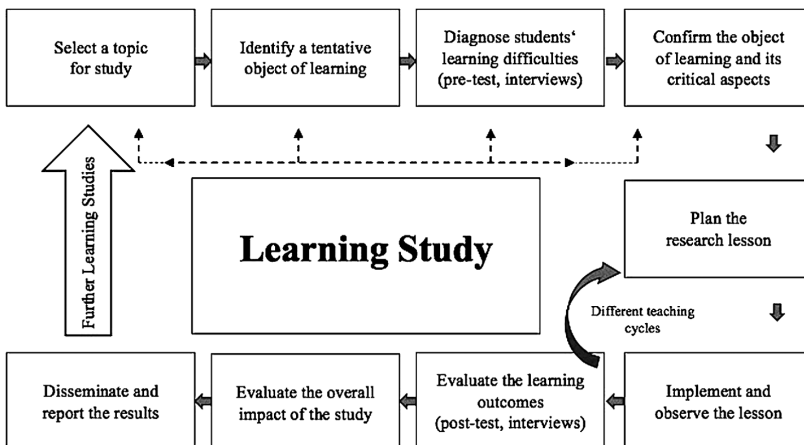


Figure 3.2 Procedure for conducting a lesson study (Lo, 2012, p. 33, slightly modified).

Learning studies

Learning studies are similar to lesson studies in form and have several features in common, including that they:

- depend on the cooperation of teachers,
- are based on the repeated analysis and revision of lessons,
- focus on the learning of teachers and students, and
- follow a similar cyclic structure.

However, they differ in an essential point: While analysis and development of instruction in a lesson study is determined by the subjective theories and experiences of the participating teachers, learning studies in contrast are based on a specific theory of teaching and learning: variation theory.

Variation theory has as its base phenomenography, an empirical research approach used to study how phenomena are experienced. Phenomenographic research led to a set of findings that became basic tenets of variation theory (Marton & Tsui, 2004):

- Every phenomenon has various aspects (for example, size, shape, functions).
- If two people focus their attention on different aspects, they will experience the phenomenon differently. Learning is therefore a change (variation) in the manner in which a phenomenon or object of learning is seen, experienced, or understood.
- The focus of attention in turn is influenced by a person's attitudes and previous experiences, and by the context and its stimulative nature in which he or she is situated. If teachers want pupils to conceive an object of learning as they perceive it, they have to try first to identify pupils' "natural" kinds of "perception" (their preconceptions) and how they differ from their own perceptions.
- We can be aware of individual characteristics of a phenomenon only if we are aware of the differences (variation) among the features: Without perceived difference there can be no knowledge, and, at least two different things must be perceived simultaneously for us to become aware of difference. First, a contrast must be experienced by non-examples before a generalization can be made by way of examples. When teaching students what a triangle is, it does not help much to show them different kinds of triangles. The teacher should rather show them what a triangle is not by comparing it with other geometric figures. By contrasting triangles with non-examples, students will discern the critical features of triangles (number of sides and angular sum). Only afterwards it makes sense to show positive examples such as different kinds of triangles (Lo, 2012).

These phenomenographic findings are the theoretical backbone of two essential elements of a learning study: the *learning object* as starting point for learning and its *critical aspects and features* that are perceived by contrasting examples.

Learning is always directed toward something—a phenomenon, an object, a skill, or certain aspects of reality. This is the learning object (Lo & Marton, 2011). Learning should change the way in which this “something” is seen, so that understanding and capacity to act are improved. A learning object can be content, an ability, or a value that the learner should acquire. Some examples are competence in essay writing, understanding of the relationship between supply and demand in price formation, development of empathy for people of other cultures. Two distinctions are important in this context. One is that the *direct object of learning* refers to the content and the subject matter to be taught in the classroom, while the *indirect learning object* refers to the ability (competence, skill, values) that is to be developed by studying the direct learning object. The indirect object of learning should draw attention to long-term goals of teaching, which largely determine the quality of the learning outcomes. The other is the distinctions among the intended, enacted, and lived object of learning—what the teacher intends and enacts, and what the pupils learn.

1.	Formation of a Learning Study team
2.	Selection of a topic and identification of the tentative learning object <ul style="list-style-type: none"> • Reflection on variations in the teachers’ understanding and ways of dealing with the object of learning • Reflection on variations of the assumed pre-knowledge of the students
3.	Definition of the final learning object <ul style="list-style-type: none"> • Pretest to diagnose the students’ pre-knowledge
4.	Identification of critical aspects of the learning object
5.	Design of the research lesson <ul style="list-style-type: none"> • Development of variation patterns • Embedment of the variation patterns in instructional methods • Motivation: Design of the relevance structure
6.	Implementation of the research lesson <ul style="list-style-type: none"> • Observation and/or recording the lesson • Post-Test and/or interviews with selected students
7.	Analysis of results and design of the second research lesson. Similar to Lesson Studies, about two to three cycles are usual
8.	Evaluation of the overall impact of the study
9.	Dissemination of results

Figure 3.3 Step-by-step process for conducting a learning study.

There are certain aspects or features of learning objects that determine how the learner sees, experiences, and understands them. They are critical aspects because they are critical for the learning process. If teachers want students to see an object as they see it, learners must be able to focus their attention on the same features as the teachers do. Because each object has many features, learners need to focus their attention on those features that are critical for the particular way of seeing and for a particular meaning to appear in the learner's awareness (Wood, 2014). Therefore, teachers need to know how learners understand an object and which prior knowledge is required for understanding (Lo & Marton, 2011).

Learning studies use the same cycle as lesson studies, but with a focus on teaching and learning using the model described above. Figure 3.3 provides a step-by-step outline for conducting a learning study.

Whole school action research

So far in our exploration of collaboration in action research, we have looked at how small groups of practitioners work together to understand and improve their practice. It is also possible for collaboration to be configured on the whole school or whole institution level. We look at this in the context of schools, but we believe that what we describe is applicable to other institutions in which practitioners work.

The defining feature of school-wide action research is the focus on the school as the entity engaged in action research. For example, Calhoun (2002, p. 20) supports it as a way to transform the school into a learning community. In her approach, the school identifies learning goals for the school and uses action research to change how it works "so that educators study student and staff learning continually and pour information from the external knowledge base into the collective study and action-taking process." To Calhoun (1994a), school-wide action research can lead to three areas of school improvement. The first is to improve the organization as a problem-solving entity. This can happen by faculty members improving the ways that they work together to identify and solve problems. The second is to improve the school experience for all students. While she describes this as a way to increase equity among the students, it relies on an assumption that has been shown to be wrong—that if you improve the teaching practices, all students will gain. While this is in itself correct, it would not necessarily increase equity. That is because the already existing social and economic inequities lead to unequal gains, thereby maintaining and possibly even increasing inequities. Third, by involving all the professional staff in action research, it can increase the breadth and content of the inquiry process. What Calhoun means by this is that when more people become involved in action research there is the possibility of identifying a wider variety of problems.

As we noted above, what is special about the idea of most models of whole school action research is that all teachers are expected to participate (Calhoun, 1994b; Clauset, Lick, & Murphy, 2008; Glanz, 2014; Hopkins, 2014; Sagor, 2010). We believe that depending upon how this requirement is implemented, it could lead to a situation in which those in power (for example, administrators or policy makers) construct an inherently undemocratic structure due to the hierarchal nature of school organizations. In addition, the focus on the institution rather than individual or small groups of practitioners can reinforce the idea of teachers as workers who are just cogs in the educational machine. Finally, the reliance on the use of high-stakes examination scores as the primary data source defines the major goal of the inquiry as the improvement of student test scores.

Professional Learning Communities

We end this section by looking more closely at one of the ways that whole school action research has been implemented in the US—Professional Learning Communities (PLCs). PLCs are a relatively recent development in the use of collaboration among teachers to reform schooling (see, for example, Clauset et al., 2008; Sagor, 2010). PLCs are similar in many ways to collaborative action research groups: they both emphasize the role of inquiry, the establishment of communities, the use of data for learning, the importance of recognition of the cultures of schools, and the goal to increase equity (Cochran-Smith & Lytle, 2009). There are, however, major differences. We illustrate them by describing some of the characteristics of PLCs, which you can then compare with the other types of practitioner groups that we describe in this chapter.

Inquiry is done in PLCs through the use of data to influence professional practice. This is done in schools primarily by using results from high-stakes examinations as the focus of group discussions. This is based on the assumption that teachers' abilities and commitments to student learning grow by "seeing in black and white" how their students' learning falls short of their expectations (Cochran-Smith & Lytle, 2009).

PLCs are generally established from the top down. Administrators at school or higher levels decide that PLCs would be a way to implement an educational reform effort. Therefore, they are usually concerned with school-wide or larger problems. This is due in part to the origins of the PLC movement in:

the sociology of the workplace, school effects research, organizational theory, and, to a lesser extent, philosophical and sociological theories of communities ... Much of the work on professional learning communities is concerned with how school structures influence teachers' work

and how the organization of teachers' work shapes teachers' practices and students' outcomes. The emphasis is on school production, or the processes through which schools generate academic achievement and other desired outcomes for which they are responsible ... [It] draws explicitly from business models of organizational reform and/or systems thinking.

(Cochran-Smith & Lytle, 2009, p. 54)

The origin of the use of PLCs for school reform has also resulted in an instrumental view of the role of professional community. That is, the communities are established for the purposes of the reform effort, which for the most part in the history of PLCs have been the different aspects of the accountability movement. Once the reform is achieved, there is no reason for the institutions to continue to support the PLCs.

Our brief description of the use of PLCs suggests that we are in agreement with Cochran-Smith and Lytle's (2009) critique of them. In many ways they are antithetical to what we believe ought to be the nature and goals for practitioner research. In addition to their structure, we also differ with the way in which the PLC movement characterizes equity as the guarantee that all students learn as demonstrated by their scores on high-stakes assessments. Instead we agree with Cochran-Smith and Lytle that the larger project of practitioner research is the enhancement of "educators' sense of social responsibility and social action in the service of a democratic society" (p. 58).

Note

- 1 Lave (1996) has shown how their theory of learning applies to teacher education. Wenger has continued to write extensively about communities of practice (Wenger, 1998, 2000, 2006; Wenger-Trayner & Wenger-Trayner, 2015) and has a website devoted to it (<http://wenger-trayner.com/>).

Finding and clarifying a starting point for your own research

The first step in a research process is to find and formulate a feasible starting point. What issue in my practical experience is worth studying over a period of time? Does it fit my capabilities and do I have the resources? Is there a fair chance I can get somewhere if I research this issue? These are questions one needs to ask when beginning action research. In this chapter, we provide some suggestions and ideas to help you to answer them.

What do we mean by starting points for research?

What does a feasible starting point for action research look like? How do teachers reach such starting points? Let's have a look at how Kory Bennett, a middle school science teacher, described his starting point to other students enrolled in a university course on action research taught by Allan (see M4.7 for more information).

Kory's starting point began with his reflecting on an experience that he had when he was in his second year of teaching. It centered on Jason, one of the pupils in his class. Kory had this first impression of Jason:

Jason was a relatively laid-back kid; he was one to two years older than most of the students in the class, and he generally spent time socially interacting with them, however, he often encouraged the other kids to participate in class activities. I thought highly of Jason as a class advocate and he was extremely respectful of me and my position as a teacher. It was obvious that he was highly adept at negotiating and manipulating his social surroundings, and at the time that made me think of him as a "smart kid." On the other hand, Jason was in the "regular" science class, which was considered by the school the "lowest level students." It was indicated on the class roster that he was receiving special education services, and his caseworker reported back to me that Jason was reading below grade level. As much as I hate to admit it, when I worked with Jason on an academic level, I often had these factors in mind, despite failing to investigate the specifics of his situation.

Jason was having a difficult time in my science class with tasks that required reading, writing and recalling the content information, and on occasion his questions seemed far from our focus and not particularly perceptive. Jason, also, despite being respectful was always willing to remind his classmates of the way that they were labeled by the school community—he was fond of yelling out, “You know we boom, boom ya’ll.” Many of the kids were well aware of the labels they wore (lower level, special ed, etc.), and how others perceived them. While Jason was able to eventually pass the class, his schoolwork basically remained on the same level on which he had started, and he continued to perform poorly on written exams. He had improved his reading level, and I had come to know him as a witty, creative young man with many social interests. However, I felt as though our class and my instruction had minimal effect on his future success.

From this first part of his starting point speech we can see how Kory, although aware of the effects of labeling, for the most part accepted what he had been told by the school about Jason. In addition, Jason’s behavior and lack of academic success seemed to confirm that. However, he became aware of a major discrepancy with his beliefs about Jason during an incident that happened during the last week of the school year.

Jason was excited to show me pictures of and tell me about his “project,” which he had mentioned for a few weeks, but without detail. The pictures were of his three-wheeled bicycle, which had two wooden boxes around the back wheels. I asked him if they were for carrying stuff, but he told me that it was the speakers for the stereo system he had hooked up to the bike. “That’s why I’m showing you,” he said (a bit surprised). I looked at it a bit puzzled at first, wondering why anyone would do that. After Jason explained it was so the “ladies” could hear him coming down the street, he told me about how he had hooked the system to the bike. He explained the wiring he had to do, how the amplifier worked, and he asked about the battery that was giving him trouble. As Jason was explaining the process, and I was searching my mind for answers about the battery, I realized that I had greatly underestimated, misunderstood, failed to interpret and simply overlooked Jason’s abilities as a human being. In this case, I failed to recognize that despite his trouble with the surface features of his educational experiences, he had a firm grasp of problem solving and creative, innovative thinking. I certainly take the blame for my misconceptions, and I feel as though I allowed the labels Jason bore (he often voiced when he felt the opportunity called for it) to cloud my perception of him on fundamental levels.

Kory’s revisiting of his interactions with Jason and reflecting on how they were both affected by the ways that Jason had been labeled by the educational system led him to ask the following questions:

I am curious of the effects, other than those intended, such a system has inflicted on the educational landscape and the children that populate it ...

Additionally, I consider how students are actively defining and redefining themselves in relation to labels, and more concretely how their teachers and peers interact with them. The only way most students know anything about labels is how that label is used in our school-site language, and how they have been treated throughout their academic career. I wonder how we can work together to construct positive perceptions of labels, or expose them for what they really are (whatever that may be).

While these questions are important, they go beyond Kory's practice and his particular educational situation. As such, they could be and have been studied using traditional educational research methods. However, rather than stopping there, Kory then added to his starting point speech what the effects might be on him as a teacher and how it affects his teaching.

I have recently realized through active reconnaissance, that my attitude as a teacher is affected by the label the overall class is given (e.g. advanced, gifted-honors). For instance, I seem to be less strict (academic and discipline) with students in "lower-level" classes, than those of the "high-levels." While I do believe that I go to great lengths to view each student as an individual, and not through generalizations and stereotypes, I know that it would be impossible to completely eliminate these influences. It is my intention to identify the effect that labeling has on my own practices. More importantly, I would like to adjust my perspective as an educator to better view my ever-fluctuating student population. As a student I was placed with both formal and informal labels in which I came to understand through my interactions with other kids and how teachers as well as my parents, talked about my educational experiences. Teachers must be aware of the profound impact we play in the formation of our students' identities; how our actions and language act as shaping agents used by our students to understand who they are and where they belong in the world.

Kory ended his starting point speech by recounting and reflecting on the last time he saw Jason, which was when he was in eighth grade.

I walked into a classroom the size of a broom closet with kids packed wall to wall. I remarked to them all, I see that they have you in the big room this week. Without missing a beat Jason said in his usual humorous way, "this is the boom, boom room, Mr. B." And all the kids laughed with him. I wonder if he'll always view himself in that way, and if I am partly to blame for his perception.

This example illustrates two further important characteristics of action research:

- 1 Whatever is formulated as the starting point can only be a first view of a situation that is very likely to change in the course of the

research process. Action research tries to avoid the dogma of fixed hypotheses that, in more traditional research approaches, cannot be modified once the research has begun (see Cronbach, 1975). Instead, the action researcher remains open to new ideas that may influence the course of the action research while it is taking place. In this way, any development of the initial starting point becomes an important indicator of the learning of the practitioner carrying out the research.

- 2 Whatever is formulated as a starting point often touches only the surface of a problem. A more detailed clarification of the problem situation and a further development of this “first impression” help to develop a deeper understanding of all the related factors and open up new possibilities for action.

Features of starting points

What are the essential features of starting points for action research? First, they have a *developmental perspective*: for example, a teacher wants to improve a practical situation, such as how to recognize the person behind the label, and to further develop his or her own competences. Second, they have a *research perspective*, an interest in understanding: practitioners want to understand the practical situation, its context, their own action within it, and their effects in order to develop this situation in a productive direction. This “double goal” is one of the main characteristics of action research (see Chapter 1) and leaves its mark on the design of action research projects.

This double goal can be seen in Kory’s starting point speech. He sought to improve his practice so that he could adjust his perspective to better view the individual pupils who make up what he called his “fluctuating student population.” At the same time his starting point had a research perspective that is tied to his desire to work toward social justice for his pupils by exposing the labels “for what they really are.”

Discrepancies Typically, starting points for action research begin with *experiences of discrepancies*. They can be:

- discrepancies between plans and expectations, on the one hand, and actual practice, on the other (for example, Kory’s desire to see every pupil as an individual human being).
- discrepancies between the present situation and a general value orientation or an aim (for example, the need to provide special services for pupils and the resulting stigmatization of being labeled “special ed.”).
- discrepancies between the ways in which different people view one and the same situation (for example, the whole class with a

large number of special needs pupils will be stigmatized as a low ability class).

Discrepancies like these give food for thought once they are consciously recognized. Action research begins with reflection upon such discrepancies and tries to save them from being forgotten in the maze of everyday work (see M2.4). They become the focus for further development of the teaching process and for the generation of knowledge about that process. Such discrepancies need not always be negative and problematic for the teacher, nurse, social worker, or other practitioners. Action research can also focus on trying out good ideas for improvements or on the further development of one's own strengths.

Sources for starting points

What are the main sources for finding starting points for research and development? In our experience, action researchers turn to the following sources (see Figure 4.1):

1 Own experiences in their practice settings

Most often it is their own observations and experiences in their work settings that give practitioners ideas and reasons for their development work. Starting points may be derived from very different types of experience. Marion Dadds (1985) mentions three types of starting points that derive from experience:

- a an *interest*—for example, trying out a promising idea, developing a strength, or coping with a routine obligation in a more considerate and economic way;
- b a *difficulty*—for example, wanting to improve a difficult situation, solve a problem, or compensate for a deficiency;
- c an *“unclear” situation*—action researchers often begin with bigger or smaller “puzzles”—situations that are not clearly positive or negative, enjoyable or burdensome, but that raise an issue they want to understand more fully. Often their work begins with unexpected experiences that they are unable to interpret, but believe might serve as a useful starting point to further develop their practice.

It is very likely that every starting point contains characteristics of all three types in various combinations. In our example, Kory wanted to improve the opportunities for all the pupils in his classes (a); but faced the problems caused by the complexity of the problem and his lack of knowledge (b); and was unclear about how to proceed to make a difference (c).



Figure 4.1 Possible sources for starting points (adapted from Altrichter, Messner, & Posch, 2004, p. 65).

2 Mission statements, on-going programs, and development programs of the institution

Topics that are important for the institution or unit, such as classrooms, schools, or clinics, provide a potential starting point for action research. So, what is promised in mission statements, programs, profiles, and management plans can be moved forward or made problematic through action research. Similarly, complaints; diminishing numbers of pupils, clients, or patients; or developments in the community or the surrounding region may produce questions and chances to be tackled by practitioners engaged in action research (Calhoun, 1994b).

3 Results from feedback and evaluations

Personal feedback provided to teachers, social workers, or nurses by pupils, clients, patients, or other stakeholders may also be starting points. Similarly, results from institutional self-evaluation, continuous quality management, external evaluations, or comparisons with other institutions or units ("benchmarking") may make visible questions that are in need of more thorough study or new pathways for development (see Altrichter et al., 2004). It is also possible for these to lead action researchers to delve into the policies that generate these types of evaluations.

4 Participation in development and in-service programs

Participation in initiatives by central and regional institutions that seek to stimulate innovation through development programs, prizes, or specific funding (see Feldman, 1995) may also provide starting points for action research: if, for example, high-quality learning in science classrooms (see Feldman & Capobianco, 2000) or cooperative open learning in upper secondary schools (see Wittwer, Salzgeber, Neuhauser, & Altrichter, 2004) is to be supported, this obviously necessitates reflective development work by practitioners. Also, in-service programs may offer ideas for development of practice, and they may also be organized as support systems for action research (see Altrichter & Posch, 1998).

5 Curiosity and “theoretical interests”

Worthwhile ideas for starting points need not necessarily stem from one’s own experiences (as in 1 and 2) or have been circulated by external agencies (as in 4). They may also derive from observing colleagues, from contacts with other fields of practice, or from print media or the Internet. You may be curious whether or not what works well with colleague X or has been found out by researcher Y also makes sense in your circumstances. You may be interested in better understanding other people’s ideas and in putting them into your practice (Feldman, 1996). Such considerations, by the way, show that action research—even if concepts such as discrepancies, problems, and difficulties are often used in the initial phase of projects—is not just appropriate for “negative” and “problematic” situations. Rather, good ideas may be tested or strengths may be developed. All in all, action research is oriented toward improvement of practice and of understanding of practice situations.

Issues for action research

What kind of issue is an appropriate focus for action research? Broadly, any professional situation about which practitioners want to gain a deeper understanding, and that they want to change, is a potential starting point. The issues could relate to the work or context of an individual action researcher, or it could relate to issues that confront the entire institution or unit. Here are some examples of the former:

- A teacher investigated the ways that the use of email with her pupils added to and took away from her practice (see Chapter 9);
- A lecturer at a university researched the way that she taught students about race and racism (see Chapter 9);

- In a participatory action research project, a group of older people focused on the end-of-life issues in their locality for themselves and collectively (see Chapter 9);
- Social workers supported community-based action research to improve the well-being of families (see Chapter 9);
- A teacher engaged in a self-study of his use of constructivist pedagogy through a review of five years of feedback from his pupils (see Chapter 9);
- Nurses developed new ways to work with their patients in a variety of settings and studied the implementation of the methods and how it affected their practice (Jenkins et al., 2005).

These examples are drawn from a wide range of practice situations. They also demonstrate that action research studies can go beyond the technical aspects of practice to focus on interpersonal relations or other social issues, or even issues beyond the confines of the institution or unit, such as the establishment of productive relationships with parents, other family members, and the community.

As we noted above, action research can also tackle issues of institutional development:

- In Chapter 1, we referred to a school that developed as a result of collaboration between a number of teachers each focusing upon their own classroom, coordinated by a deputy head (Wakeman, 1986).
- A secondary teacher researched the processes of decision making and the operation of power in the school where she worked, drawing colleagues into collaboration in the process, first by eliciting their views in interviews and later by inviting them to contribute to redrafting the written report (Somekh, 2006a, Chapter 3).
- In a primary school, the team of teachers responsible for teaching the youngest children focused on the use of computers to support language development in their pupils, for the majority of whom English was a second language (Ourtilbour, 1991). Their collaborative action research resulted in changes in the school's policies and practice.
- A secondary teacher, responsible for coordinating colleagues' professional development in the use of computers as educational tools, carried out action research upon her own role in bringing about institutional development (Griffin, 1990).
- A police educator researched the implementation of a new strategy for the education of police managers (Adlam, 1999).
- A medical team did an action research study of an in-patient stroke service in a London teaching hospital (Kilbride, Meyer, Flatley, & Perry, 2005).

In general, institutional issues are more difficult to tackle than issues of individual practice. The practical, theoretical, and political problems of

action research tend to increase greatly when the focus moves beyond the classroom to institutional development. These can really only be tackled if the action researcher is already experienced, or if the action research is undertaken in the context of a project involving a number of practitioners from the same institution or school.

Finding starting points

Those who decide to engage in action research either have:

- a one very specific question in mind, often needing urgent attention;
- b many different questions in mind, none of which constitutes an obvious starting point;
- c no concrete ideas from which to begin an investigation; or
- d a starting point that is defined by a larger project of which they are a part. This is often the case for projects funded by outside agencies (for example, Ashton et al., 1990; Feldman, 1995; Somekh, 2006a).

The suggestions and ideas below are especially intended for cases (b) and (c). However, they can also be useful for case (a) and (d), especially if someone is beginning action research for the first time and wants to check the feasibility of tackling a question by comparing it with alternative possibilities. We have suggested the following approaches to practitioners with whom we have worked:

- Formulate more than one possible starting point.
- Consider all the potential starting points in relation to everyday practice, over a period of time.
- Invest sufficient time to make the exploration of possible starting points as wide-ranging as possible.

The ease and speed with which a meaningful question is likely to be found is frequently miscalculated. Some time may be necessary before any single issue relating to an individual's professional practice emerges as the one of greatest importance and one that can be clearly formulated. The amount of time needed will differ from person to person and context to context. In action research courses run at universities that last for a semester, the first two to four weeks are reserved for finding starting points. In action research projects¹ that we have facilitated and that lasted for two to three years, it was not unusual for a teacher to take over a semester to select his/her focus. Even within tightly scheduled projects there should be opportunities for individual variations in the amount of time spent on this important stage.

Your personal search for a starting point could be facilitated by the following exercises:

M4.1 Brainstorming: finding starting points

One step toward finding a starting point for your own action research could be individual or group brainstorming. Brainstorming is a structured activity that is typically done as part of a small group with the intention of coming up with new ideas or ways to solve problems (see M7.1). It can also result in the group increasing in motivation to accomplish its goals, and to come together better as a team. When the goal of brainstorming is to find starting points, it can be done using the following steps:

- 1 Agree on an objective for the brainstorming.
- 2 Individual group members follow a procedure that helps them to come up with ideas about how to reach the objective. This is usually limited to an agreed-upon time limit.
- 3 The group as a whole engages in a process of categorizing, condensing, and/or combining ideas to refine them. It is important that no idea is discarded without being considered carefully by the group as a whole.
- 4 The group follows an agreed-upon procedure to analyze, assess, and prioritize or rank the brainstormed ideas.
- 5 Select two or three ideas as possible starting points.

Brainstorming in a group can either result in a set of starting points for group collaborative action research, or the activity can be used to help the individuals in the group come up with their own starting points.

Brainstorming can also be done individually rather than in a group setting. It follows the same steps, but is handicapped by not having the input and critique of others. We strongly encourage action researchers to have a critical friend who can provide feedback and critique about the ideas generated. Below we provide some suggestions about who to engage in individual brainstorming. In general, these questions and suggestions can also be used in group brainstorming by changing the “I” to the “we.”

- 1 Think of your own practical experience:
 - Is there any question that you have wanted to investigate for a long time already?
 - Which of your strengths would you like to develop?

- Are there any aspects of your work that you find puzzling and that have already been a focus for your reflection?
- Are there any situations that cause difficulties and that you would like to cope with more effectively?

Let your thoughts flow freely and write down your first spontaneous associations in the form of catchwords. You might like to use your research journal to record these. Don't spend more than six to eight minutes!

- 2 Once you have recorded your initial ideas you may be able to stimulate further ideas for starting points by using these incomplete sentences (Kemmis & McTaggart, 1982, p. 18):
 - I would like to improve the ...
 - Some people (pupils/parents/patients/clients/family members/colleagues) are unhappy about ... What can I do to change the situation?
 - I am perplexed by ...
 - ... is a source of irritation. What can I do about it?
 - If I ... I am completely worn out afterwards.
 - Again and again I get angry about ...
 - I have an idea I would like to try out in my practice.
 - How can the experience of ... (recounted by a colleague, or found in my reading, etc.) be applied to ...?
- 3 If you have already started to keep your research journal, read through what you have written and see whether it generates additional ideas for starting points for action research.
- 4 You can enrich the formulation of your potential starting points—and at the same time carry out a first, provisional analysis of each situation—if you use these questions to identify the most important characteristics:
 - What happens in this situation?
 - Who does what?
 - Which contextual factors are especially important in understanding this situation?
- 5 Try to condense the results of this brainstorming exercise by formulating a question for each possible starting point as precisely as possible.

M4.2 Giving consideration to several starting points²

We recommend that you do not make an immediate decision on a starting point, but instead keep several starting points in mind to

test their feasibility in the light of your everyday experience. You can do this in the following way: Take the list of possible starting points that you generated from the brainstorming exercise (M4.1) and select three to five situations that seem the most interesting to you. Write down on a card, or in a note that you can easily access on your digital device, the specific issue that interests you in each of these situations. See Figure 4.2.

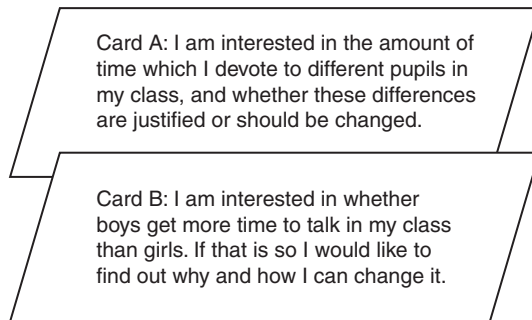


Figure 4.2 Issue cards (redrawn from *Developing Teaching*, 1984, p. 12).

At the end of each day over the next week take your cards and shuffle them, or randomly look at the notes on your device. Then take the first card or note, and for about three minutes reflect on the day and think about any events that seem relevant to the issue recorded on it. Write down your ideas in keywords either on the cards, the notes, or in your research journal. Afterwards spend a minute on each of the remaining cards or notes to think briefly about the other issues, possibly making brief notes in your journal.

M4.3 The photovoice metaphor

Photovoice is a research method that aims to capture a person's voice through photography and narrative. It was initially developed by Carolyn Wang (2006) as a tool for participatory action research. For more information about this method see M4.11. Michael DiCicco (2014) took Wang's method and modified it for his research to capture the beliefs of English education preservice teachers in order to identify how these individuals perceived the teaching of struggling

readers. Although he does not use the term, we call his method the *photovoice metaphor* to distinguish it from traditional photovoice.

In the photovoice metaphor method, action researchers respond to a question or questions about their practice. If they are part of a group, they might want to discuss those questions before the next step, which is to take photographs that answer the questions *metaphorically*. They then choose three of those photos and write a short explanation about how each answered the question. An important part of this method is that you do NOT take photographs of people.

DiCicco's reason why the goal of this method is to construct photographic metaphors in response to questions about practice is based on the work of Lakoff and Johnson (1980). They argue that metaphors are the ways in which people think, perceive, and act. To DiCicco, then, by making the metaphors explicit, the preservice teachers can come to better understand their preconceptions about their students.

We suggest that a photovoice metaphor question that you might want to begin with is: "What does it mean for me to be a [teacher, research assistant (RA), school leader, etc.]?" Go out and take photographs that best represent what it means to you to be a [teacher, RA, school leader, etc.], metaphorically. Again, the one catch is that you CANNOT take pictures of people. Choose three of those pictures and write a short paragraph for each photo explaining how it represents what it means about who you are in your practice. It is also possible to use photographs from existing sources, such as magazines or the Internet. While this may seem easier to do, especially for those who think they need to be artistic to take the photos, we believe that by taking them yourself, it gets you thinking more about your educational situation.

If you are part of an action research group, share your photos and paragraphs with your critical friends. You may want to use the analytic discourse to structure your discussion. If you are doing the action research by yourself, you may want to reflect on the meaning of the photos in your research notebook.

Approaches to choosing a starting point

How can I choose a starting point from the many interests and questions that come to mind in relation to my own practical experience? Are some starting points more or less suitable than others? How can I identify the more suitable ones?

M4.4 Choosing a starting point

You can examine the available starting points in the following way:

- 1 Remember that action research has a *developmental perspective*. Check your starting point against these questions:

- What is your focus for possible development?
- What might you want to try out?
- What might you want to change?

Doing action research does not mean that you have to change everything. Nevertheless, it is important that when you embark on action research you have a genuine interest in development. Sometimes the main change is in your perception of the situation rather than in adopting specific new strategies.

- 2 Look at the starting points that you have formulated so far in the light of the following criteria, and write brief notes to record for each the pluses and minuses of adopting it as your main action research focus.
 - a *Scope for action* Does the situation come from my own field of experience? Can I really do something about this? Do I have any possibility of influencing this situation and/or taking action? Or am I too dependent on other people and institutional structures? Would an improvement in this situation depend primarily on changing the behavior of other people?
 - b *Relevance* How important is this situation to me and to my professional concerns? Is this issue worth the effort in an educational, social, or health-related sense? Is it concerned with important values? Is it likely that this situation will still interest me in a few weeks' time? Am I willing to invest a certain amount of energy in dealing with this situation? Am I interested in this situation in order to change and improve something?
 - c *Manageability* Do I have the time to cope with this? Are there too many preparatory or related tasks to be coped with before I can start this project? Will it make too many demands of me? When you begin action research don't choose a question that is "too big." When in doubt opt for the smaller or more limited project. In general, it is better to build on successes even if they are small rather than having to reduce one's aims because they prove impossible to fulfill. There may be time later to extend your work.

- d *Compatibility* How compatible would this question be with the rest of my activities if I select it as my action research focus? Would it involve things that I have to do anyway? How well does this intended action research fit in with my forward planning? Would it be possible to build some action research activities directly into my practice (for example, pupils interviewing each other, group discussions, etc.)? If you are in doubt, decide on a starting point that fits thematically with those things you do anyway in your practice.
- 3 Now select the starting point that comes closest to these criteria. The result will not always be clear-cut, but sometimes may involve weighing up the advantages and disadvantages of two or three options. However, we believe that this process in itself can be an important help in identifying the question that best fits with your personal situation.
 - 4 Next, try to document your starting point as vividly as possible in your research journal. Formulating your starting point for action research generally has four elements:
 - a *A short description of the situation* What happens in this situation? Who does what? Which contextual factors are especially important in understanding this situation?
 - b *Questions that indicate your action research interests* What do I want to find out? What issues or relationships do I want to understand more thoroughly? What questions about my teaching do I want to answer more clearly?
 - c *Questions that indicate the developmental interests* What would I like to try out? What would I like to change/improve? In what direction do I want to develop the situation in order to make it better for myself, the pupils, patients, or clients, and other parties involved?
 - d *What is my next step?* What do I want to do in order to better understand the situation? What action could help to develop the situation into the direction I aim for?

Although this may all sound rather complicated, it is in reality relatively simple. Here are some examples of starting points (adapted from Kemmis & McTaggart, 1982):

When they are doing group work the pupils seem to waste a lot of time (a). What exactly are they doing? What productive and unproductive activities are frequently to be observed? Are different groups behaving differently (b)? How can I increase the

amount of task-oriented time for pupils engaging in group work (c)? I want to talk to my colleague Cynthia who is said to run very stimulating and effective group work (d).

- My pupils are not satisfied with the methods I use to assess their work. What exactly do they complain about? What are the arguments? How can I improve assessment methods with their help? I want to ask my colleague Fred to interview some pupils in form 4.
- Most parents want to help their children and the school by supervising homework. What can we do to make their help more productive?
- My elderly mentally ill patients often fall in nursing homes. What do I need to know to prevent this?

M4.5 The “Gap:” making discrepancies explicit

Previously in this chapter we discussed how starting points for action research can originate from discrepancies in one’s practice. However, often these discrepancies are tacit and therefore you need some way to bring them to the surface. This method is done with at least one other person whom you see as your “critical friend.” A critical friend is someone who has empathy for your action research situation and can relate closely to your concerns, but at the same time is able to provide you with rich and honest feedback (M4.7). An even better way of doing this is with colleagues who are also engaged in action research with whom you take turns being the presenter.

- 1 Begin by doing a *freewrite* in which you explore the “gap” between how you would like to see yourself as a practitioner and the way you actually are. If you need to, look back in this chapter to the section on discrepancies to get some ideas of the type of gaps that there may be in your practice. The technique of free-writing was developed by Peter Elbow. He describes the process in this way:

The idea is simply to write for ten minutes (later on, perhaps fifteen or twenty). Don’t stop for anything. Go quickly without rushing. Never stop to look back, to cross something out, to wonder how to spell something, to wonder what word or thought to use, or to think about what you are doing. If you can’t think of a word or a spelling, just use a squiggle or else write “I can’t think what to say, I can’t think what to say” as

many times as you want; or repeat the last word you wrote over and over again; or anything else. The only requirement is that you never stop.

(Elbow, 1998, p. 1)

The gap activity is an example of what Elbow calls a “directed freewrite.” What this means is that rather than being able to write about anything that comes to your mind, you are asked to restrict yourself to a particular topic or area, which, in this case, is your practice. As a result, you may find yourself in the position in which you “can’t think what to say.” If you find yourself running out of things to talk about, remember that you know much more about your practice than the people you are sharing your thoughts with (your critical friend or others in your collaborative action research group). Therefore, if you run out of things to write about in reference to your gap, you can always provide details about your practice situation.

- 2 Tell your critical friend or collaborative action research group about your “gap.” Take no less than five minutes to tell your friend/the others what you wrote. You do not need to read out loud what you wrote; feel free to tell the story of your gap. If you find that you haven’t used at least five minutes, fill the time by describing the details of your practice situation. You should not be interrupted when you are doing your telling. Once the five minutes are up, your critical friend or members of your collaborative action research group should question you about the gap in your practice. Use the rules of “analytic discourse” (M4.6): only ask questions, do not make suggestions, and make sure that the questions are not suggestions in disguise.
- 3 Have someone else in the group or your critical friend (if he or she is also engaged in action research) take a turn telling about the gap in their practice and answering questions about it.
- 4 Be sure to make a memo about the gap activity in your research journal.

Clarifying the starting point of research

In the first part of this chapter, we provided some insights and methods for finding a starting point for your action research. One can think of a starting point as the *first impression* or the *first interpretation* of your practice situation. In this part of the chapter, we turn to some methods and their theoretical bases for clarifying your starting point. By this we mean delving more deeply into your situation and your concerns to better understand how to

engage in action research to improve your practice and situation, and to gain a better understanding of it that you can share with others.

Before we take a look at the various ways that you can clarify your starting point we would like to offer some suggestions and caveats that have arisen from our own practice of action research:

- 1 It is important to engage consciously in clarifying the starting point but at the same time its importance should not be exaggerated. After all, clarifying the situation is the task of the whole research process: if we aimed for absolute clarity about all aspects of a situation before beginning, we would never start at all. "The process of analysis is an endless one, but in action research it must be interrupted for the sake of action. And the point of interruption should be when one has sufficient confidence in the hypotheses to allow them to guide action" (Elliott, 1991, p. 175).
- 2 The time needed for clarifying the situation can vary considerably. It will depend on the complexity of the problem to be investigated, the researcher's prior experience and depth of reflection, the accessibility of crucial information, the relative ease with which explanatory patterns and theories emerge, etc. There is a comforting rule of thumb: the total time needed in research for clarifying the situation will always be nearly the same—if you take less time in the earlier stages, you will have to invest more time later on, and vice versa.
- 3 Even if a lot of effort is invested in clarifying the situation in considerable depth in the early phases of action research, understanding will change during the process of further research—not because the initial understanding was "wrong" but because this is an outcome of the process. The researching practitioner is not merely interested in confirming insights once they are gained, but in further development in depth and analysis of understanding. All actions—those that are primarily to do with one's practice and those that relate to the research itself—can open new insights, no matter whether they happen at the beginning or the end of the process. To neglect and discount these insights—as sometimes happens in academic research aimed at confirming or refuting initial hypotheses—is not sensible for the practitioner. Unexamined problems will come back sooner or later and waste the time and energy of teacher and pupils, nurse and patients, and social worker and clients.
- 4 Sometimes, clarifying the situation is the single most important result of the research. For example, for one teacher, a recorded interview with an apparently difficult pupil led to clearing up a misunderstanding and seeing the pupil in quite a new light. Because of seeing her in a new light the relationship between the teacher and the pupil became more relaxed; that in turn changed the way the teacher treated the

pupil. In this case, the situation changed at the time of clarifying the situation, because interview data enabled the teacher to see the pupil differently. There was no need for a systematic testing of new strategies of action.

From the “first impression”

Jonathan Haraty was a teacher at the SAGE School located in an urban area in the US. SAGE is a collaboration between the local school district (local education authority), the Department of Youth Services, and a local post-secondary institution. The school was founded to serve pupils charged with crimes or on probation. The primary objective of the school is to modify behaviors so that the pupils attend school and do not return to the court system. Jonathan chose to teach in this school because he wanted to help the pupils to be successful in school and in life. To do so, he believes that he must treat each of his pupils as an individual.

Jonathan began his action research study by writing a “slice of life” (M2.2) about an incident that occurred in one of his classes:

Today one of my middle school students, Natalie, asked me why I was not making her work up to her potential ... She stated that her mother had looked over her schoolwork and felt that she had already done this in previous grades. She went on to state that she was beginning to get bored and that when this happened, she generally stopped coming to school.

He elaborated on this in his action research report. He wrote that this exchange with Natalie led him to think about whether:

I was reaching all my pupils at their intellectual level or whether I was gearing my classes towards those pupils who need the remedial work and pace. I started looking at my pupils in this class, and the other three science classes that I teach, looking for pupils that I may not be allowing to reach their full potential by placing them with the rest of the class. I noticed several pupils who have always completed the assigned work, and were getting very good grades, seemed to be looking out the windows a lot or were distracting other pupils.

He decided that he would use a simple, open-ended survey with all of his pupils to identify who felt they were not moving fast enough in the class. Using the responses to the survey and his observations, he would then select several pupils to do a personal interview. He also decided to interview a pupil from the preceding year who was currently enrolled in community college.

Jonathan learned from his data that rather than treating every pupil as an individual, he had assumed that all of his pupils needed remedial work and had directed his teaching at that level. He also saw that rather than helping his pupils succeed in school, his teaching methods may actually have caused some of them

to drop out. He also found that there were pupils who would welcome extra work. One pupil said it would make him feel good because it would mean he was on top of the class. Another told Jonathan that he would feel important. A third said that she wouldn't mind the extra work "because that just means that I am improving."

Jonathan found his interview of a pupil who had already graduated the most insightful:

When asked in the interview if he would have done more work, or different work from the class, he stated, "Don't you remember? You gave me more work that allowed me to go at a faster pace than the rest of the class. Sometimes I resented it, but now that I'm in college, it helped."

This interview triggered a new interpretation of his educational situation and made him look at what had changed in the last year. The major change was that in addition to enrolling pupils in the court system, SAGE had begun to admit pupils who had documented learning disabilities. In response to this new population, Jonathan was told to focus on "reading and writing across the curriculum." In the past years, he was able to differentiate his instruction because he focused on what he knew how to do—teach science. The new task to teach reading and writing to pupils with learning disabilities, for which he lacked the skills, now appeared to be the main reason why he taught all the pupils the same way and targeted his instruction toward those who were most needy.

One of Jonathan's first impressions was that he had somehow for some reason abandoned the "better" pupil in his classes. It was not until he further investigated his situation that he began to take into account the changes in the make-up of the pupils and the change in curricular emphasis in his school. We believe that there are at least three points in Jonathan's action research that are of special interest. The first one is so obvious that it is easily overlooked: what we think about an issue and what we do or say may not be wholly consistent. For instance, in this example, Jonathan was not aware that he was treating all of his pupils as if they needed remediation, which conflicted with his belief that he should differentiate his instruction based on the needs and abilities of his pupils.

The second point is closely related to the first: what we intend by what we say and do can be interpreted quite differently by our pupils, patients, or clients. The fact that our intentions and actions affect others only via their perceptions and interpretations can lead to problems when we change our practice. Jonathan implemented new methods that he hoped would help the pupils with learning disabilities to better their reading and writing skills. However, his new way of teaching was interpreted by the "better pupils" to be below their abilities and uninteresting, which led to them being turned off from school. The introduction of new practices presupposes a change in the routine perceptions and

actions of teachers and pupils, nurses and patients, and social workers and clients. This is often a long-term process in that all the participants have to become conscious of the new roles, explore them, and test their reliability.

The third point arising from Jonathan's action research study is that our first interpretation of a situation does not always get to the heart of the matter, even if it sounds plausible and even if new strategies for action can be derived from it, as illustrated in the example above. Jonathan's first interpretation of his situation was based on his discovery of a dissonance in his practice—he wanted to treat students as an individual but instead was treating all of them as if they needed remediation. Our first impression often relies on familiar assumptions and long-standing prejudices. Jonathan was interpreting what was happening in his class and with his students as if they were a self-contained unit, unaffected by factors outside of their control. In Jonathan's situation, his first interpretation did not take into account a major shift in the focus of his school from serving students with a wide range of abilities who had gotten into trouble with the law to serving students with learning disabilities. If we want to bring about improvements in practice situations it is important to test the quality of the first impression in order to establish a sound basis for development, both within our immediate situation and how it fits within the broader perspective. Answering the following questions can achieve this:

1 Does the first impression neglect any existing information?

The first impression often gives a plausible picture because we use data selectively and ignore information that contradicts or deviates from our view of the situation. Jonathan's first impression—that he had somehow for some reason abandoned the “better” pupils in his classes—ignored the fact that the nature of the pupil body had changed and that the school's administration had made a major change in the curriculum. By ignoring the larger context in his first impression, Jonathan saw the problem as his personal professional failure, rather than the result of being asked to do something for which he was ill-prepared.

2 Does the first impression contain any vague, ambiguous concepts?

Often the initial interpretation uses concepts whose ambiguity may have been a contributory factor to the problem. Jonathan changed his practice when the school administration told him that he must teach “reading and writing across the curriculum.” The phrase was originally used to describe a particular way of infusing the teaching of literacy

skills into all subject areas, not just language arts. However, by the time that Jonathan was told to do it, it had lost most of its meaning and had become an empty slogan. Because he had no knowledge of what it originally referred to, and because he knew little about how to teach reading and writing, he acted upon the administration's request in a simplistic manner—he had the pupils take turns reading from their textbook. Clearly, the vagueness of the meaning of “reading and writing across the curriculum” contributed to Jonathan's first impression of what was happening in his classes.

3 *Does the first impression deal only with the surface symptoms of the situation?*

The first interpretation of a situation sometimes consists of a detailed description of diverse events and actions without uncovering or explaining their underlying implications. One could say that such a representation sets out the surface symptoms but does not progress to an in-depth interpretation. Surface symptoms comprise all observations and empirical generalizations that refer directly to the problem, for example: “I don't challenge my students to work hard.” An in-depth interpretation puts forward a broad pattern of interpretation that appears to explain different phenomena and relate them to each other. For example, “The change in the student body and the change in the administration's expectations of teachers requires Jonathan to have skills and knowledge that he is missing for him to successfully differentiate instruction.” Both levels are connected with each other: in order to grasp a problem fully, an in-depth interpretation is essential because it reveals the interconnections between different factors in a situation—often it is not the event itself that creates a problem but the interpretations and tacit assumptions that individuals bring to the event.

4 *Has the first impression been accepted without testing it against other competing interpretations?*

Jonathan's action research study illustrates this question quite clearly. The first impression, fed by tacit assumptions and previous experiences, provides a seemingly plausible interpretation—that his failure to make all his pupils work up to their potential was due to his failure to recognize their needs. This interpretation is neither doubted nor questioned in the light of possible alternatives. Prime among them is the effects on his teaching of the change in the make-up of the pupil body and the school administration's call for him to change his teaching in ways that were not clearly defined and for which he had little or no training.

Facing problems and dealing with discrepancies between plans and their implementation in practice is not pleasant. We tend to try to forget

about them as soon as possible. By confronting first impressions with alternative interpretations, action research slows down the process of problem resolution. This in turn increases the chances of more reliable interpretations that can be used as a basis for improving practice.

Clarifying the starting point through reconnaissance

In one of Kurt Lewin's earliest writings on action research, he described the steps that we now associate with the cycle of action research (Lewin, 1946). According to Lewin, one begins with a general idea, what we have called the starting point. However, as Lewin noted, the starting point and how to reach its desirable objective is usually not clear. To clarify the starting point, he suggested that the action researcher engage in fact-finding or reconnaissance. Reconnaissance, according to Lewin, has four functions. First, it ought to evaluate any possible actions taken by the practitioner. Second, by gathering information, one can gain insight into the strengths and weaknesses of the starting point. This then can serve as the basis for the third function—modifying the starting point. Finally, it serves as a foundation for the overall action research plan.

Reconnaissance can be used to clarify the starting point by using the following processes:

- The action researcher tries to get access to additional knowledge and to use it for reflection.
- The first impression or initial formulation of the starting point is questioned by this additional knowledge and refined, extended, or changed.

As we do this, we are again going through what we call a mini-action research cycle. This can be seen in the example at the beginning of this chapter, in which Jonathan gained access to additional information on the starting point from his pupils. The information from these interviews served to question his interpretation of the situation and suggested an alternative meaning. Besides interviews there are a number of other ways of tapping additional knowledge, including activating tacit knowledge; collecting additional information; collecting views on similar situations from non-participants; and experimenting by introducing changes in existing situations. We look at each of these below.

Activating tacit knowledge

A fundamental aspect of being human is that as we live our lives, we learn as we experience the world (Lave & Wenger, 1991). However, we are not always aware of what we have learned or know (see Chapter 10). Because

in many ways, as action researchers, we are our own primary research instrument, it is important for us to make knowledge, such as the routine actions and assumptions that develop through our lived experience, accessible to reconnaissance and self-reflection. That is, we need to find ways to make what is called tacit knowledge (Polanyi, 1962) explicit. Tacit knowledge consists of “all those things that we know how to do but perhaps do not know how to explain (at least symbolically) ... Tacit knowledge is messy, difficult to study, regarded as being of negligible epistemic worth” (London School of Economics, 2010, p. 1). To Polanyi, tacit knowledge is a type of knowledge that cannot be expressed in the form of propositions (language) or mathematically, and therefore one can only see it in action. There are many examples of tacit knowledge, including knowing how to tie a knot or hit a baseball, or even recognizing someone’s face. However, much of what we know tacitly can be made explicit because, as Polanyi wrote, “the aim of a skillful performance is achieved by the observance of a set of rules which are not known as such to the person following them” (Polanyi, 1958, p. 49). There are a number of methods that we can use to activate this tacit knowledge:

- *Activating tacit knowledge by journal writing and review of journal entries.* The act of writing memos and other types of journal entries can in itself make tacit knowledge explicit (see Chapter 2). As Mary Lou Holly wrote:

Writing about experience enables the author to view his/her experiences within broader contexts: social, political, economic and educational ... Writing taps tacit knowledge; it brings into awareness that which we sensed but could not explain.

(Holly, 1989, p. 75)

In addition, when we read what we have written, we have the opportunity to view it as an outsider and to see the text as describing what has happened to others. Patterns that we were not aware of become distinct in the text, and assumptions are made problematic. By writing, and reading what we have written, we construct and reconstruct our experience (Holly, 1989). In this way, writing in journals and examining what we wrote is a form of reconnaissance that can help us to formulate new interpretations and cross-links that we missed in the first impression of the situation.

- *Activating tacit knowledge by conversations.* Recounting events in our practice by telling others about them as a narrative or story facilitates introspection because we have to order our experiences before we can tell someone about them. It helps to clarify the situation further

if the listeners can contribute actively to generating the narrative, for example, by posing questions, asking for additional information, and reflecting back to the narrator their provisional understanding of the situation. The analytic discourse (M4.6) tries to create such a conversational situation by means of a few simple rules. Another method is the combination of sharing stories and questioning called *enhanced normal practice* (Feldman, 1996). When practitioners engage in enhanced normal practice they tell brief stories about their work. The others in the group hear and listen to the storyteller, and respond with their own stories or with questions. There are generally three types of responses: other stories; questions about the details of what was described or explained in the story; and more critical questions that ask “Why?” as well as “What, where, how, and when?” When practitioners share stories about their work with one another in this way, there is an oral exchange and generation of knowledge and understanding by the recounting and questioning of some event or explanation of one’s understanding to others. A conversation with a critical friend (M4.7) is useful in a similar way for teachers who do not have access to a group of colleagues engaged in collaborative action research, lesson study (Lewis, Perry, & Murata, 2006), or as part of a professional learning community (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006).

- *Activating tacit knowledge by being interviewed.* Conversations are two-way, democratic exchanges among peers (Feldman, 1999). In an interview, one person is in the role of interviewer—the question asker—while the other person has the role of interviewee—the answerer. There is also the expectation that the interview results in information transfer from the interviewee to the interviewer. Therefore, in most situations, interviews are a one-exchange. In addition, in many cases, there is hierarchal difference where the interviewer is in a position of power relative to the interviewee because the former is in charge of the exchange through the control of the questioning process. This can be changed by simply having the interviewee be the one who develops the interview protocol and recruits the interviewer, often a critical friend, to ask the questions. This then becomes a form of reconnaissance in which the action researcher examines and reflects on what he or she said in response to the questions. We suggest that the interview be done as a semi-structured interview, in which there is an initial set of questions that can be modified and expanded as the interview progresses.
- *Activating tacit knowledge by ordering conscious knowledge.* Tacit knowledge is usually contrasted with explicit knowledge, which is knowledge that can be expressed in words, symbols, or numbers. We prefer instead to use the term conscious knowledge to make clear that an

individual's personal or professional knowledge has value, even though it has not been codified or even articulated. There are a variety of different ways that we can order our conscious knowledge to activate our tacit knowledge. For example, by generating graphic representations of our knowledge we can often formulate existing experience more completely and identify blank spots in our awareness (M4.9). We can also take observations and descriptions and organize them into a story (M4.10), or construct a story from photographs of our practice situations (M4.11). In M4.12, we suggest a method for making assumptions and categories explicit and using them to generate hypotheses about your practice. Each of these Ms serves as a form of reconnaissance to help to clarify the starting point.

- *Activating tacit knowledge by reading one's own actions.* Reading an action implies that there is a kind of knowledge embedded in action that has been previously ignored. The following example is from Allan's study of his action research class:

I structure the course so that there are two parallel strands. One is a focus on the literature about and theory of action research. I have my students read articles about the nature of research, different approaches to practitioner research, critical theory, and ethical issues related to doing research on one's practice. The other focus is the practice of action research. I have the students go through the processes that we lay out in this book from finding and clarifying a starting point to data collection and analysis, and finally making their action research public to their peers. The class meets once per week in the evenings for just less than three hours. My intention had been to have half of each session focus on each of the two strands, but I felt uneasy about how things were going. Looking back on the reflective notes that I kept I realized that the time spent on theory, in which I took center stage, often went more than half of the class, leaving little time for the students to collaborate with one another on the practice of action research. Clearly my actions did not match my intended aims. I decided to switch the agenda for each class meeting so that the practical part preceded the part that focused on theory. That way the students would always have time to engage with one another in collaborative action research.

In this example, by reading his actions, Allan came to see that although he wanted his classes to have a significant amount of time for students to engage in the practice of action research, he was acting in ways that were consistent with the norms of a university course in which the instructor is the "font of knowledge." Through his reconnaissance he was able to reject the familiar meaning and aims that we normally associate with a university course.

Two other ways to read one's actions are to revisit an action as if it were something strange and exotic, pretending to know nothing in order to know better, and to imagine that your actions are the answer to some unvoiced question. This can be done by asking yourself, "What question am I answering through my actions?"

Sometimes, teachers and other practitioners formulate starting points and state aims that are contrary to their deeply rooted practices. This contradiction remains undiscovered if the knowledge hidden in action does not become conscious. In such cases, new action strategies to improve a situation (for example, a new plan for storing resources, or a new strategy for improving the way groups report back to each other) cannot easily be put into practice because of their tacit contradiction with established routines of action.

Collecting additional information that is available in the situation

One possible way of testing our knowledge of a situation we want to improve and develop is to obtain additional information—perhaps by carrying out an observation or by interviewing other people involved. The whole inventory of data collection methods can be used for this purpose (see Chapter 5).

Collecting views on similar situations from non-participants

To discover alternative interpretations of your practice situation we suggest you:

- ask colleagues about similar situations;
- read relevant books and articles in magazines and journals.

Other people's views can provide starting points for our own reflection, helping to actuate our tacit knowledge, or stimulate us to collect additional information. It is important to remain clear that such explanations are hypothetical, providing stimuli for research and development rather than replacing them. It is also important to remember that we are rarely the first person to be in the situation that we are investigating. The research, professional and practitioner books and journals, can be important sources of alternative interpretations. It is also important to remember that just because that information is published, it does not necessarily carry more weight for the interpretation of your situation than ones that you develop yourself or with your colleagues.

Clarifying the starting point by introducing changes in existing situations

The detective Sam Spade said, “My way of learning is to heave a wild and unpredictable monkey-wrench into the machinery. It’s all right with me, if you’re sure none of the flying pieces will hurt you” (Hammet, 1989). Kurt Lewin, one of the originators of action research, suggested a somewhat less destructive way of understanding practice situations: “One of the best ways to understand the world is to try to change it” (quoted in Argyris, Putnam, & Smith, 1985). By introducing changes, trying out new actions and observing their results, our view of the situation in which we find ourselves is often deepened. We provide information and suggestions for trying out this strategy in Chapter 7.

Clarifying the starting point through the elaboration of practical theories

Before introducing methods and exercises for clarifying the starting point we look at one of the ways in which this can be done—through the articulation of a practical theory of the situation to be studied. A practical theory is a conceptual structure or vision that helps provide practitioners with reasons and explanations for actions (Sanders & McCutcheon, 1986). They can be thought of as rules-of-thumb based on experience and consisting of “a repertoire of practices, strategies, and ideas” that help practitioners incorporate into their work their best practices and those of others (Nussbaum, 1986, p. 50).

Handal and Lauvås (1987, p. 9) defined practical theories as “a person’s private, integrated but ever-changing system of knowledge, experience and values which is relevant to teaching practice at any particular time.” They are “shaped by life experience, professional experiences, the stories of others, and reflection on personal experiences and the experiences of others” (Feldman, 2000, pp. 610–611). To John Elliott, practical theories are “developed within practice situations in which judgment needs to be exercised ... [and arise] in the context of action, where the practitioner is attempting to understand a practical situation s(he) experiences to be unsatisfactory” (Elliott, 2005b, p. 5). All practitioners enter their practice situation, for example a classroom, with a set of practical theories that have arisen from these types of everyday experiences, or through thoughtful inquiry like action research. (See Chapter 10 for more about practical theories.)

Individual elements of practical theories and their interrelationships

The articulation of practical theories and the clarification of the starting point happen together. For example, the clarification is attempted by

formulating individual elements of the practical theory and the connections among those elements.

I Elaborating the context of our practice situation

Practical theories are highly contextual. Making them explicit can help to clarify the starting point for our action research. However, that requires us to describe and elaborate the context of our practice situation. To do so, we first try to identify the most important individual elements of the situation, to distinguish them from less important elements, and describe them as vividly as possible. We can do this by asking:

- What is happening in this situation?
- Which events, actions, and features of the situation are important?
- Which people are involved, in what kind of activities?

Let us try to illustrate the process of elaborating a situation by an example. A possible starting point for the research could be:

Pupils seem to be very noisy during discussions in class. How can I organize the discussion so that it is less noisy?

The starting point begins with a statement that describes the situation (M4.3). We can now investigate this more carefully:

- *Which pupils are noisy?*
- *What are they doing when they are noisy?*
- *Does their noisiness result from taking part in the discussion or from something else?*
- *Why does it matter if they are noisy?*
- *How can I define exactly what I mean by “noisy”?*
- *Is there a particular time of day or environment when discussion is noisier than at other times or in other places?*
- *How do I respond when they are noisy in discussions? Do different responses from me have different effects on them?*

When we formulate important individual elements of the practical theory we should not restrict ourselves to what happened in the immediate situation, but also take account of the broader context. Action research doesn't take place in a laboratory in which the researcher controls most of the context. For example, nurses work with real patients in hospitals, hospices, and elsewhere. Their own actions are embedded in a framework of other people's interests and actions. Their action research activities in turn have consequences for others. Guiding questions for clarifying the context could be:

- Which other people are affected by my action research activities?
- Whom do I need to consult to ensure that I have freedom to act with the greatest possibility of success?
- Which features of the institution in which I work are likely to have an influence on the question I want to investigate?
- What are the broad social and political determinants that I need to take into account in relation to my question?
- What ethical issues ought I consider?

2 *Formulating the connections among elements of the practical theory*

The answers to the questions above lead to the second area that needs to be addressed in clarifying the starting point: we are not only interested in single features of the situation, but also in the connections among them. We need to engage in analysis (identifying the constituent parts), and also in synthesis (drawing threads together). The point is that we need to become aware of our practical theories that make connections among individual elements, and of how they influence our interpretation of the situation:

- How does this situation come about?
- What important connections are there among events, contextual factors, the actions of individuals, and other elements of this situation?
- What is my initial, instinctive personal interpretation of this situation?

On the basis of these questions it is possible to formulate statements of this kind:

- If a nurse assesses patients solely through asking them questions from a standard form, he or she may miss other important cues from the patient (Meyer & Bridges, 1998).
- If a teacher tends to follow up the answer to a question with a supplementary question, pupils will tend to refuse to answer questions even if they are sure of the answer.
- The finite amount of staff available in an emergency department means that the busier the department becomes, the harder it is to give proper, individualized care to all patients (Meyer & Bridges, 1998).
- The greater the expectation in a school that well-disciplined classrooms should be quiet places, the more difficult it will be to conduct classroom discussions without giving rise to discipline problems.

Sentences like these establish connections among individual elements of a situation (for example, between the teacher's comments and the level of the pupils' participation in a discussion); and they put forward a possible explanation for these connections.

In scientific literature, such statements are usually called *hypotheses*, and this term is useful in action research as well. Hypotheses can be used to express aspects of someone's practical knowledge (see Chapter 10). It is important to be clear about their nature:

- A hypothesis is a statement that is based on a possible explanation that ties the elements together. The second example above ties together the asking of supplementary questions with pupils' reluctance to answer any question. In generating a hypothesis, it is important to have some reason for thinking that the elements are connected in this way. In this case, it may be that pupils usually volunteer to answer questions to which they know the answers. If they are required to respond to an unexpected follow-up question for which they may not know the answer, they may feel "stupid" in front of their classmates.
- A hypothesis does not have to be correct. The term itself implies that the explanation is tentative and needs to be tested against experience or evidence.
- A hypothesis throws light on only one aspect of a complex situation, rather than the whole situation. As hypotheses are derived from specific situations, even when they have been verified they will still need to be re-examined in new situations (see Cronbach, 1975).
- A hypothesis tells us about the relationship among specific features of the situation and actions or events that result from them. Therefore, they can be used as a basis for planning future action (see Chapter 7).

Commonly held views that influence our practical theories

In our experience, there are some commonly held views that influence practical theories about what happens in our practice situations. These views are like glasses that we look through without being aware of them. Of course, it is not possible for any human being to do without these glasses: for example, we are all influenced by theories and explanations prevalent in our time, as well as the cultural milieu in which we are immersed. However, it is a good idea to try to identify some of these "glasses" and the unconscious influence they exert on the way we interpret situations. When clarifying the starting point, we suggest that it is important to try to become more conscious of these hidden attitudes, preconceptions, and social and cultural forces. Useful questions to ask yourself include:

- Could things have been different?
- Can I interpret this situation in another way?
- What assumptions am I making as I try to understand the situation?

We want to go on now to describe some of these commonly held views in order to illustrate our point.

Positive and negative influences

Most of us think of negative factors first when we try to explain and understand our practice situations. Early analysis tends to focus on negative experiences, often because the starting point has been chosen in response to an undesirable experience. But a focus on just the negative influences can prevent us from seeing the situation clearly.

First, it is important to take into account the positive aspects of the experience because they offer possibilities for positive action and improvement. One way of getting a better overview is to make a table placing these positive and negative influences side by side for comparison. Second, the distinction between positive and negative influences is useful for another reason: often on closer inspection it turns out that something that on the surface seems to cause problems is a hidden opportunity. Here is an example from a teacher's action research:

After a serious conflict with his class in which the teacher became verbally aggressive, he asked his pupils to write about their perceptions of the event. Their writing gave a very negative view of what had happened and of the teacher's use of words that the teacher found to be insulting.

(Schindler, 1993)

When you read this your attention may be drawn to the negative points of the situation. However, on closer inspection, you may find some positive points: for example, only in a relationship in which there is a lot of trust would the pupils dare to express such open and emotional criticism. This example reminds us of the situation in the movie *The Class* (*Entre Les Murs*) in which a teacher's use of "insulting" words resulted in a crisis with no good resolution (Cantet, 2008) because of the erosion of trust.

Another example comes from the work of nurses:

In the reflective group, the nurses on the ward expressed difficulty in looking after older patients with impairments in cognition (e.g. dementia) and/or communication, and shared how hard this type of work was. In my observations, I too had noticed the tendency for these nurses to prioritize the delivery of physical over psychosocial care.

(Bridges, Meyer, & Glynn, 2001)

While the nurses felt negatively about aspects of their work and this perhaps led to a tendency to avoid these aspects in practice, their willingness to discuss this in a reflective group and explore how they could improve the care they delivered is very positive.

There are many instances in our practices in which the glass could be seen as half-full or half-empty. As you use the methods for clarifying the

starting point found at the end of this chapter, think about whether you are viewing the situation from a positive or a negative perspective, and try to find an explanation that reverses your view.

The practitioner as originator or pawn

Richard DeCharms (1973) distinguished between two opposing self-images that people can hold. There are the originators who see themselves as responsible for their own actions, and there are the pawns who see themselves moved by powerful hands. Action research encourages researching practitioners to develop strategies for action to improve their situations. In doing so, it encourages them to develop a self-image as originator. This needs to be balanced by an understanding that human situations are conditioned by multiple forces and cannot be fully controlled by anyone. To achieve this balance, it is useful to pose some critical questions:

- What possibilities for action are there in different situations?
- In what situations do I feel confident to effect change?
- In which situations am I mainly dependent in my actions on other people?
- What social or cultural forces affect my practice?

Many people see themselves as dependent on external forces and underestimate the contribution they can make to the situation. For these people action research tends to challenge their self-concept, inviting them to explore possibilities for action and encouraging them to show greater autonomy.

There are also others who act like pawns because they believe that their practice is so constrained that they cannot make any changes in their actions. While there are many real constraints, such as regulations, laws, and ethics, there are many that are myths (Tobin & McRobbie, 1996). These mythical constraints are often in the form of expectations or obligations to behave in certain ways. One way to separate real from mythical constraints is to ask yourself what you would do if there were no barriers to your practice. In doing so, you can isolate the constraints and test their veracity.

A causal or a systemic view

Another approach that elaborates on these ideas is helpful in clarifying the starting point. Positive and negative influences are not seen as separate, but stand in either a causal or a systemic relationship to each other.

CAUSAL RELATIONSHIPS

The *causal relationship* needs little explanation. A is the cause of B. Pupil X disrupts the lesson because she knows that this gives her status with her classmates. Patient Y refuses to watch his diet because he is only concerned with the pleasures of the moment and not with long-term effects on his health.

The advantage of causal interpretations is that they suggest definite reasons and apparently simplify the complexity of a situation. They also help us to place a moral interpretation on events by assigning guilt (to the pupil, a colleague, the parents, or ourselves). However, causal interpretations have their problems. One is that situations are usually caused by a number of contributing factors. For example, a pupil's bad behavior might be traced back to preceding events involving other pupils, parents, and two or three teachers. Her behavior can therefore be regarded partly as a reaction to other, preceding events. This is not an argument against causal interpretations, but it does mean that we must be careful not to settle quickly for one that is too simple because each cause may itself have layers of further causes.

Let's take the case of a young teacher taking a new class for the first time. She will be a bit nervous and, either instinctively or consciously, wants to win the pupils over and gain control. This purpose will be expressed in her behavior. Let's look at the pupils: they sit tensely, perhaps rather skeptical, keyed up, and interested in holding their own against the teacher, individually and as a group. This purpose will be expressed in their behavior. At the same time, they will watch every action of the teacher closely and their interpretations of her behavior will influence their own behavior.

The noisiness of some pupils is interpreted by the teacher as a threat to her control of the class. The pupils notice the irresolute appearance of the teacher and it makes them feel insecure. Is the pupils' noisiness caused by the wavering appearance of the teacher or vice versa? This question cannot be answered, as there is some evidence for both possibilities. Looked at from the pupils' point of view the first answer will be more plausible, looked at from the teacher's the second will be more plausible. As it is impossible to know whether the noisiness or the wavering came first we cannot tell which should be regarded as the cause of the other. If we identify a cause, it will be arbitrary.

The systemic view

What happens if we decide that there is no point in searching for causes and the people responsible? An alternative is the *systemic view* (see Selvini-Palazzoli, Boscolo, Cecchin, & Prata, 1978). According to this view a practice situation is regarded as a system in that each participant (for example, the teacher, pupils, parents, and administrators or nurses, patients, family

members, and doctors) has a relationship to one another. Each person influences the other members and is influenced by them. A change in the behavior of one member leads to a change in the whole system.

Every kind of behavior can be regarded as both the result of feedback from the behavior of others and an influence on their further behavior. Even “non-behavior” (for example, the silence of classmates when one pupil disturbs the lesson) can in this sense be seen as information for the “troublemaker,” the teacher, and the pupils.

A system is a network of mutual relationships (expectations, kinds of behavior, perceptions) in which the practitioner is caught up. It is easier to understand if we imagine the network consisting of threads that are alive. A particular action of a social worker is dynamically connected to the network so that he both is affected by all its threads and influences them. But there is limited room for each thread to move if the network is not to be destroyed. There are longer and shorter threads and there are knots in the network. These are the points at which threads intersect. Therefore, an occurrence in one’s practice originates from the whole network even if some parts of the network play a more important role than others. An extreme example of this happened in the health care system in the US. Nurses and other health care professionals joined with their patients to call for greater patient rights. The main thrust of this was to provide information to patients and their families so that they could make knowledgeable decisions about their care rather than leaving it entirely in the hands of doctors and, in more recent years, health maintenance organizations (HMOs). A totally unexpected side effect of the success of this movement was that pharmaceutical companies began to market directly to patients rather than doctors because the patients now had a say in their care. Residents of the US are now bombarded by advertisements from the pharmaceutical companies that provide them with the “information” that they need to make decisions about their health care.

What can we learn from the systemic view? It enables us to ask new questions. Not questions that search for causes of events and attribute blame, but questions like:

- Which threads (for example, other pupils’ and the teacher’s expectations) contribute to the event (for example, a pupil’s disruptive action)?
- What is the function of a pupil’s disruptive behavior for other pupils (and for the teacher)?
- Which are the sensitive spots (knots where many threads meet) in the event?

The systemic view also has another advantage: it can help us to arrive at a less emotional, more detached and, therefore, probably also fairer approach to situations in class, because it broadens our view beyond

immediate, concrete causes. The interdependence of the elements in a system leads to a kind of balance (the tension of the net) to which the quiet pupils as well as the troublemakers contribute. The actions of a troublemaker can cause the “normality” of the “good” pupils and vice versa (thus, many teachers have noticed that when a disruptive pupil leaves the class another will often emerge to take his/her place).

If we pursue this perspective it can also offer suggestions for action. In any situation, the system is kept in balance by feedback from its interacting elements (participants in the practice situation). However, this feedback can also change the system. This means, for example, that it is important to know what feedback (from other pupils or the teacher) reinforces a “troublemaker” and what does not (it may be that any form of attention acts to reinforce the bad behavior). We can start to solve the problem by influencing the nature of the feedback (for example, by giving other pupils a chance to express their opinions or by the teacher voicing his/her own perceptions of a situation).

A focus for analysis is to find the *knots* where the threads interact and particularly influence events. For example, a pupil who disturbs the class may be looking for reactions from higher status pupils in the class. There are also occasions that result in interactions that cause a difficult situation, such as when a pupil comes to feel humiliated by a teacher’s actions. We believe that the methods at the end of this chapter will provide you with the tools that you need to go beyond a causal perspective and to uncover the systemic aspects of your practice situation.

Holistic and analytic perspectives

In this chapter, we have given a number of hints for clarifying the starting point of research. This process of clarification is not value-free. By clarifying or analyzing situations and problems we are necessarily rather selective and reductionist (see also Chapter 6). When we reduce the complexity in our practice to a few central features it often results in a mechanistic view of reality. This tendency has to be counteracted from time to time during the research process. We must not equate a reductionist and mechanistic model with the reality in which we live and act, which is much more complex than our model. The following suggestions may help to prevent this:

- Once you have developed hypotheses don’t view them in isolation from one another, but always look for possible links among them. Take the systemic view.
- Try to keep in mind the specific situation from which the hypothesis was derived initially, by asking from time to time: Under what conditions would the prediction of my hypothesis be likely to be valid? Under what conditions would it likely stop being valid?

Methods for clarifying the starting point

Conversations

Conversations with colleagues play an important part in action research. This holds not only for the stage of “clarifying the starting point” discussed in this chapter but for the whole research process. Conversation has long been seen as a method of research. In science, new ideas are tested by engaging in grand, cooperative conversations that follow agreed-upon standards (Putnam, 1995). Interviews can be held in a conversational manner (Seidman, 2013), and an important part of ethnographic research is to engage in conversations with participants (Fetterman, 2010). Conversation has also been recognized, from a feminist perspective, as a way to make meaning of data (Belenkey, Clinchy, Goldberger, & Tarule, 1986; Josselson, 2006). In addition, the use of narratives, which can be stories told to one another, is another way that conversations can serve to make sense of your practice situation (Caine, 2010; Connelly & Clandinin, 1990).

We urge you to engage in conversation about your research. The partners in the conversation should be *critical friends*: they should have empathy for the action researcher’s situation and relate closely to his or her concerns, but at the same time be able to provide rich and honest feedback. A small team of action researchers creates better conditions for action research than a person working alone. The group can all be working on the same problem or each member could have his or her own starting point. Another good way of working is to form research tandems. The partners in each tandem have their own starting points for research but assist each other as critical friends, sharing experiences, and helping with data collection (see Chapter 3).

M4.6 Analytic discourse in a group

This procedure allows us to increase our awareness of the important characteristics of any situation and to enhance our understanding of their interdependencies. However, it presupposes that the analysis is carried out in a group rather than individually. In analytic discourse, a problem or issue is analyzed in the following way:

- 1 It is the task of the action researcher who wants to analyze a problem to provide the group with basic information on the issue to be discussed (in about five minutes); and subsequently to answer questions put forward by the group as comprehensively as he or she deems possible or feasible.
- 2 It is the task of the remaining participants to gain a comprehensive and consistent impression of the situation by means of asking questions. These rules have proved to be important in carrying out analytic discourse:

- There should be questions only: statements concerning similar experiences should be avoided. This rule aims at focusing attention on the situation of the reporter.
 - Critical comments (including those in the form of questions) should not be permitted. This rule, of special importance at the beginning of a discourse, aims at preventing the reporter from becoming defensive rather than reflective.
 - Suggestions for solutions should not be permitted. This rule is to ensure that the search for an increasingly profound understanding of the problem is not cut short by a compilation of recipes. Be careful not to ask leading questions that are really suggestions, like "Have you considered ...?"
- 3 A moderator (usually one of the participants, who is prepared to assume that role) should monitor adherence to these rules after they have been discussed beforehand with all participants. He or she is allowed to ask questions and may use this as a means of opening up new perspectives.
 - 4 For the analysis of a situation three types of questions are predominantly suitable:
 - Questions that help the participants to better understand the situation by making it more concrete (for example, the request to give an example or provide more details).
 - Questions concerning the underlying theories (for example, a request to give reasons for any action described, or any interpretations of events put forward).
 - Questions concerning an expansion of the system (for example, the request to give more information about people or events who may be related to the problem but have not so far been mentioned).

We have seen many examples of how the *analytic discourse* has been an effective method for gaining an in-depth understanding of a problem. Through it, the interrelationships among the elements of the problem, including the "headache areas," become apparent. This can provide a basis for solutions or for a new line of inquiry. An analytic discourse can lead to a deeper understanding of the problem—particularly for the person reporting but also for the whole group.

It usually takes some time for an analytic discourse to open up a problem in depth and become an intellectually worthwhile and personally enriching experience. The personal enrichment has to do with the seriousness, the sympathy, and the personal concern that may develop in the group. The intellectual value derives from a growing understanding of the intricate relationship among

observations, tacit assumptions, and evaluations that are specific to one person's situation, but that have many implications for the other participants' self-understanding.

Usually the action researcher for whom it is organized gains the greatest benefit from an analytic discourse. Apart from the deepening relationship with colleagues that results, the reporter develops a clearer and more analytical view of the problem or issue. Sometimes this can be experienced quite dramatically, if the reporter's perception of the problem changes fundamentally or approaches to its solution emerge. Often there is emotional relief as a result of a more analytical view of the starting point.

The role of the moderator is not always simple because it involves seeing that rules are observed that are against the practice of everyday conversation and that, therefore, are "forgotten" easily. The moderator must see that the rules are kept or run the risk of the discourse remaining at a superficial level.

It may sometimes be necessary to refuse to accept questions that go too deep and invite a level of personal and emotional commitment unwarranted by the level of mutual trust in the group. Too much emotional involvement can also interfere with analysis because it draws attention away from a systemic view of a situation to a one-sided, causal interpretation (possibly too personally focused).

In the course of an analytic discourse, progress should be made in three areas:

- The situation in which the research problem occurs should be clarified (knowledge of surface symptoms).
- An understanding should develop of "positive" and "negative" factors and influences related to the problem (in-depth interpretation).
- An understanding should develop of the potential for change (in thinking and action). To this end, coherence and holistic plausibility of analysis is often more important for a researching teacher than the "objective" quality of individual arguments.

It has proved to be helpful if there is still some time left at the end of an analytic discourse for discussion without the rules. Often there is strong interest in the group in talking about the experience. If this opportunity is announced at the beginning of the discourse, when the moderator explains and negotiates the rules, it takes pressure off the process because participants who urgently want to "tell their own story" know they will get their chance later.

M4.7 Conversation with a critical friend

If you have no group of fellow researchers to take part in an analytic discourse, you can do something similar with a critical friend, a person whom you trust and feel you can confide in. Of course, one-to-one conversations would not follow the rules as strictly as we have suggested for an analytic discourse. Nonetheless it can still be very useful to adopt a similar discipline:

If you want to assist a colleague in clarifying a situation, it is useful to devote a period of time to gaining an understanding of the situation and:

- only ask questions that deepen this understanding;
- refrain from any anecdotes, adverse criticisms, or suggested solutions that might distract or deflect the train of your colleague's reflective thinking.

M4.8 The starting point speech

One of the ways to organize your thoughts and ideas about your starting point is to write—and, if possible, present—an informative speech about it. The audience for the speech should be your research group, your critical friend, or possibly other interested colleagues. We suggest that it be a short speech (five to ten minutes) in which you explain why your starting point is important to your practice.

Here are some suggestions of what the speech could contain:

- a statement of your starting point;
- why it is important to your practice;
- the general idea: “a state of affairs or situation one wishes to change or improve on” (Elliott, 1991, p. 72);
- the results of reconnaissance—a description of the facts of the situation, and an explanation of the facts of the situation (Elliott, 1991, p. 73);
- a list of several places that you might look in the research literature to learn more about the problem;
- “a statement of the factors one is going to change or modify in order to improve the situation, and the actions one will undertake in this direction” (Elliott, 1991, p. 75);
- your ethical concerns and what you might do about them.

Using diagrams

Normally theories start with a verbal description (written or spoken) of a situation. After a period of reflection, discussion, and/or writing, the salient points are then drawn out and expressed in succinct, verbal statements (that is, the hypotheses). Of necessity these statements are reductionist, losing much of the complexity and detail of the situation they attempt to explain.

Miles, Huberman, and Saldaña (2014) have suggested that narrative texts (and other ways of presenting theories linguistically) overstretch the human capability to digest information and therefore lead to oversimplified interpretations. They make a plea for more frequent use of diagrams and other graphical means of representing theories. Narrative texts organize information according to the sequential structure of language and pose a problem for the representation of non-sequential events. Diagrams, on the other hand, allow us to represent information and its interrelationships in a structured, rapidly accessible, and compact form.

Miles et al. (2014) give some suggestions for constructing diagrams:

- Limit the diagram or chart, whenever possible, to one sheet of paper.
- Try out several alternative ways of representing the situation. Many changes and modifications may be necessary before you are satisfied. The graphical representation should not be thought of as a straitjacket to limit future work but more like a map of the area that has just been researched. A main purpose of research is to contribute to the development of maps.
- Avoid “the no-risk framework.” If the elements of the situation are defined only in very general terms, and two-way arrows connect everything to everything else, it will be easy to confirm the theory but it is unlikely to have any explanatory value. It is better to express your ideas as concretely and definitely as possible. The more exactly a practical theory is formulated, the more helpful it will be for your further work (although it is likely to need considerable modification).
- Use the graphical representation for your own development. Outcomes of practical experience, existing theories, and the results of important research studies can be “mapped on to” it at a later stage. This will help to identify parallels, overlaps, contradictions, and gaps and, in this way, refine and deepen your understanding of the field of study.

It has also been suggested to us by Eisner (1994) that one of the purposes of a diagram is to make complex ideas accessible. While oversimplified diagrams may not sufficiently conceptualize the situation, ones that are too complex will befuddle you and your colleagues. If your research group or critical friend cannot understand your diagram without a lot of explanation from you, try to make it simpler.

In the following M, we suggest a practical method for creating a diagram.

M4.9 Graphical reconstructions

Graphical reconstructions help to clarify the situation but also help with data analysis in general (see Chapter 6).

Procedure

- 1 Read all your data and your notes in your research notebook (for example, your short description of the situation and questions that indicate the developmental perspective (see M4.4)).
- 2 Write the most important features, events, and actions that you identify in your data separately on small index cards. Then write on further cards the *most important* contextual conditions of the situation. Try not to have too many cards (particularly at first) or it may be too difficult to keep them all in view: 8–16 cards are ideal as a rule. If you find there is a need to include further items as the activity progresses, new cards can easily be added.
- 3 Now try to express the kind of relationship between the cards. For that purpose, you can use further cards with symbols for relationships. Probably you will most often need the ones illustrated in Figure 4.3. Other symbols can be written on blank cards as needed.

The point of *graphical reconstructions* is that in presenting the essential elements graphically (and not in a linguistic flow of ideas) you have to restrict yourself to essentials and be clear and concise. This helps to identify the most important features of a situation. Working with movable cards makes it easy to try out different configurations until you find one that satisfactorily reconstructs the situation you are considering. As you move the cards you go through a process of clarifying the relationships among all the elements of the situation.

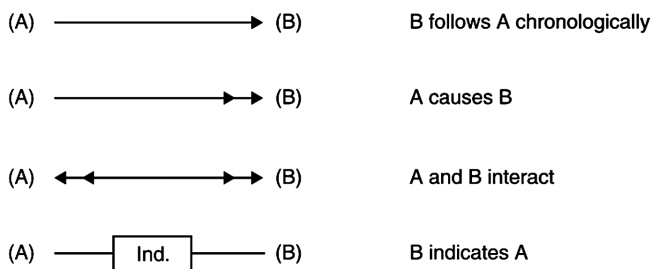


Figure 4.3 Symbols for relationships.

- 4 When you have found a representation of the starting point that really satisfies you, copy the *graphic diagram* on to a single sheet of paper. Preserve this diagram. In the course of your research you will be able to see how your ideas change. You can also use the diagram to check how plans for actions fit your personal theory as represented in the diagram: From which elements of my theory do my plans for innovative actions originate? Why exactly do I think they originate there and not from other points on the diagram?
- 5 There is software that you can use to construct graphical representations. This type of software is used to visualize connections among concepts and ideas by providing users with the tools to construct diagrams like those shown in Figure 4.4. A popular one among teachers is called *Inspiration*®, which includes features such as the ability to go from the diagram view to an outline view, and to incorporate text, images, video, and audio into the diagram and outline. Many of these tools can be used on tablets and smart phones, as well as computers.

The following is an example from action research done by Vanessa Vernaza-Hernandez. Vanessa was an assistant for a Research Experiences for Teachers (RET) project. In the RET, secondary science teachers spent six weeks during the summer engaged in scientific research. They were expected to take what they learned from that experience and implement it in their classrooms. Vanessa's role was to work with the teachers to help them develop and implement a unit plan, and to do action research on how they implemented it in their classes.

My practice consists in helping these teachers to develop and/or review their unit plan and help them to conceptualize their action research. The diagram (see Figure 4.4) reflects the events and actions that have characterized my practice so far and the relationship among these events and actions. In addition, the diagram shows some events that are expected to arise as a result of the realization of certain ideas and actions.

The diagram shows how I began with my previous experience and reading of the RET proposal. This led to the development of my starting point, which I discussed with one of the RET teachers and my critical friend. The teacher expressed some doubts and questions related to the process of action research. So, I searched in the literature for different articles to improve my understanding, and also to provide the teachers with resources and tools that they could use to develop knowledge about educational research that would empower them with their action research projects.

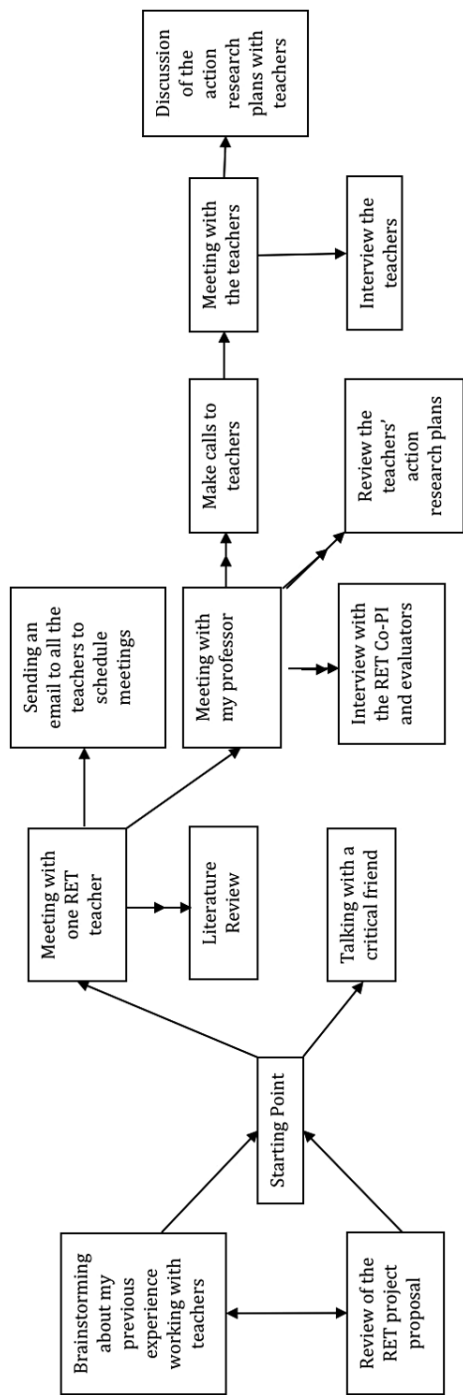


Figure 4.4 A graphical reconstruction of clarifying the starting point.

Vanessa's next step was to contact the teachers by email to set up meetings with her professor and the decision to seek additional information from them. However, she didn't get much response. This led her to have conversations with the RET project principal investigators (PIs) and evaluators to gain a better understanding of her practice situation.

This first cycle of my action research process is helping me to understand why the teachers are not responding and to know which communication strategies the teachers, PIs, and evaluator consider the most appropriate to communicate with the teachers. In this way, I will be able to incorporate the teachers', Co-PIs' and evaluators' recommendations into my practice of action research, which will help me to improve the process of communication with the teachers and which, certainly, will result in the successful development and implementation of the teachers' action research.

M4.10 A story from cards

Try to observe practical situations that are important in relation to your starting point for action research over a defined period of time (for example, between one and three weeks depending on the research question).

- 1 After each observation, describe the situation as precisely as possible on a large index card.
- 2 At the end of the time, take all the cards and read through them.
- 3 Try to write a general explanatory statement that relates to all the situations you have observed.
- 4 Check this explanatory statement by answering the following questions for each card in turn.
 - Is it possible to present the situation described on this card using the concepts in my general explanatory statement?
 - How?
 - If the situation I observed is distorted or fragmented by this attempt, what changes or additions do I need to make to the explanatory statement?

As with many of the M activities in this book, you could do this using a computer or other digital device. That said, we recommend the use of cards because they are easy to sort through and arrange by laying them out on a table or work surface. This can provide you with a holistic view that may be difficult to produce on a screen.

M4.11 Photovoice: a story from photos

Caroline Wang developed the photovoice technique as part of her participatory action research work with women's health issues in rural China. Wang has three main goals for photovoice:

to enable people: (1) to record and reflect their community's strengths and concerns; (2) to promote critical dialog and knowledge about personal and community issues through large and small group discussions of photographs; and (3) to reach policymakers.

(Wang, 1999, p. 185)

There are numerous examples of photovoice projects available on the Internet and published in books. One of Wang's more recent articles describes how it can be used as a participatory action research strategy that can contribute to youth mobilization for community change (Wang, 2006). Although it was not labeled as photovoice, the use of photography by children in the documentary film *Born into Brothels* (Kauffman & Briski, 2004) is an example of how photography can be used to gain new perspectives of your situation.

You can use the photovoice technique to gather data about your situation, reflect upon it, and construct a story through pictures that provides you with new ways to think about your starting point. We suggest the following steps:

- Take a series of still photographs of your practice situation. You may want to plan out your pictures ahead of time or just carry a camera with you for several days. If your photos contain pictures of your pupils, patients, or clients, you will need their permission to share them with others, including your research group or critical friends. Even if you do not intend to share the photos, you should ask permission to take them.
- Select 15–20 of the photos, put them into some order, and give them captions. Wang suggests that you try to answer these questions, which she labels with the acronym SHOWeD:
 - What do you See here?
 - What's really Happening here?
 - How does this relate to Our lives?
 - Why does this situation, concern, or strength exist?
 - What can we Do about it? (Wang, 2006, p. 151)

- Wait a few days and revisit your photovoice project. It also helps to present your photovoice project with commentary to your research group or critical friend. Then answer these questions:
 - What do the photos you selected and the captions you wrote tell you about your practice situation?
 - Were there any significant aspects of your practice that you did not include? Why didn't you include them?

M4.12 From categories to hypotheses

We formulate hypotheses as part of our action research in order to make ourselves aware of our tacit assumptions and provide an orderly framework for our action research. The starting point is usually a loosely structured information base (experiences, knowledge taken from books or data). Working on this information the action researcher tries to impose a pattern by identifying important characteristics or categories as distinct from unimportant ones and by making connections between these categories explicit. Unlike in graphical reconstruction (M4.8), the results of the analysis are not expressed diagrammatically, but linguistically. In what follows, the procedure of formulating hypotheses is split up into steps, each illustrated by an example (see also the practical hints for coding data in M6.2).

- 1 First, try to identify your assumptions about the situation in question as they are documented in your research notebook, in other data you have already collected, or in your memories from reading or experience (documentation). For example, a teacher made the following notes from memory after seeing a video recording of one of his lessons.

The recorded lesson once again shows the problem I have identified: in this class there is no discussion that is kept alive by the pupils themselves for any length of time. Even if I ask questions or express provocative opinions there is normally little response and the topic is closed ... Watching the video I became aware of a pattern that occurred four times (the first time stimulated by a worksheet that all the pupils had to read, the other times by a question from me). First a genuinely controversial topic is introduced for discussion. Then three or four pupils say something that is relevant to it. Then I put forward my opinion. Then only one or two more pupils say anything further (in one case nobody said anything further). Does the discussion die as a result of my statement?

2 Write down all the categories that emerge. To do this we need to know exactly what a category is. Unfortunately, it is difficult to give one overall definition, but here is an attempt:

- A category is a concept, usually represented by a noun (with some additional phrase) that is used to label some aspect or phenomenon in your journal entry, other data, or experiences. It can be used as a key to help you order the ideas in your documentation.
- The action researcher creates the order of the ideas by using a category to stand for several phenomena, which in the documentation are likely to be expressed in quite different forms.
- By putting them in a category, different aspects or phenomena that you regard as important are differentiated from unimportant ones (that is, those that are not put in a category) within the framework of the action research question.

It is easier to understand the concept of a category with the help of examples. As an exercise we suggest that you reread the description above and make a list of categories contained in the text that you think could be important in clarifying the situation.

My list of categories _____

We have also done this exercise ourselves and made the following list of categories:

- *class discussion* (developed from, "In this class there is no discussion ...");
- *teacher's questions* (developed from, "Even if I ask questions or express provocative opinions ...");
- *topic introduction* (developed from, "a genuinely controversial topic is introduced for discussion");
- *pupils' responses* (developed from, "there is normally little response ...," "then three or four pupils say something ...," and "only one or two more pupils say anything further");
- *discussion dying* (developed from, "Does the discussion die ...?");
- *teacher stating views on controversial topics* (developed from, "Then I put forward my opinion").

We see some value in keeping categories close to the wording of the original text initially and, as the analysis progresses, regrouping some of these as more general categories. If your list is worded differently or contains different categories it need not be “wrong.” Maybe you see a different pattern from us in this situation. In the end, the “rightness” of a category is determined by its usefulness (that is, its analytic power) for further research and action. In any case, comparing different lists of categories drawn up by different people (for example, yours and ours) helps us to understand the alternative perspectives expressed through the selection of categories. If you have the opportunity, discuss these differences with your research group or a critical friend.

- 3 When you have made your list of categories from your action research, check this interim result:
 - Are there categories that actually describe the same phenomenon and can be combined in one category?
 - Are there any categories that represent different aspects of a more general concept (that is either already included in your list or should be added)? In our example, “discussion dying” is closely related to “pupils’ responses.” We keep the more general category “pupils’ responses” and cross out “discussion dying” on our list.
- 4 When reading the data and making the first list of categories, same patterns connecting categories usually emerge that need to be written down. Make a list of hypotheses that express presumed relationships among these categories. Usually hypotheses are formulated in an “if ... then” form. Try this out by taking two categories from your list and writing down a possible connection in the form of a hypothesis:

My hypothesis _____

For example, from our list of categories we set up this hypothesis:

If there is more “teacher stating views on controversial topics,”
 then there will be less “pupils’ responses.”

Or in a stylistically more elegant form:

If the teacher expresses opinions on controversial topics more frequently, then the frequency of pupils’ responses (to the controversial topic) will be reduced.

Remember that hypotheses need to do more than describe the relationship among categories—they should also provide an explanation as to why that connection exists.

- 5 Examine the list of hypotheses that you have drawn up, using the following criteria:
 - Which categories do not appear at all in the hypotheses or only figure marginally? Why not?
 - Is it because you don't have a theoretical concept of these categories—in other words, that you don't really know what they mean?
 - Is it only possible to identify trivial connections between them and other categories?
 - Is it only possible to identify hypotheses that cannot really be investigated?
 - To which hypotheses can you already bring a lot of experience (examples?), and which ones are very speculative?
 - In order to test these hypotheses, what action could you take in your practice and what data would you need to collect?

Notes

- 1 For example, the Physics Teachers Action Research Project in California (Erzberger et al., 1996), the Formative Assessment Action Research Project in Massachusetts (Kropf, Emery, & Venemen, 2003), the evaluation of the ICT Test Bed Project (Somekh, 2006b), and environmental education teachers (Kyburz-Graber, Hart, Posch, & Robottom, 2006).
- 2 Modified from *Developing Teaching* (1984).

Developing a research plan and collecting data

How do action researchers get the material for their reflections, their *data*? The chapters on the research notebook and on finding a starting point have already presented some methods of data collection. This chapter deals with it more systematically. We begin by discussing what data are and the relationship between data and the situations we want to research. We then provide some suggestions for developing a data collection plan. The main body of the chapter is taken up with presenting various data collection methods. We end with discussion of criteria for judging the quality of action research.

What are data?

We are able to take skillful and knowledgeable action in daily routines as a result of our experiences. Experiences are all the events and our interpretations of them that have taken place in the situations in which we are participants. We use them to plan, carry out, and evaluate later actions. Some of them we soon forget; others, to use a computer metaphor, are stored in our mind as knowledge, including as *practical theories* about specific situations, and can be retrieved to inform later actions. Others remain with us as tacit knowledge that we draw upon unconsciously but that can be made explicit through some of the methods we described in the previous chapter. We can draw in this way not only on our own experiences, but also on those of other people to which we have access through listening to, reading their accounts, or artistic or other forms of representation.

All the different kinds of *empirical* research, including action research, are based on experiences. Traditionally, great importance is attached to *verification*. However, experiences can only be verified if they are not unique, and therefore accessible to the researcher and others again and again. Experiences can be verified in different ways:

- If the event the experiences refer to can be repeated;
- If the event has left some traces, independent of the researcher, that can be investigated by the researcher and others;
- If the researcher has used some means to represent the experiences (for example, in a research notebook or on audio or video recording) and these representations are available to the researcher and others independent of the original context of time and place.

In action research, where we are dealing with human interactions in real situations rather than the laboratory, it is complicated or impossible to repeat events (point 1), and in any case reflection takes more time than is generally available during an event, so action researchers depend heavily on *data* that give *indirect* access to events (points 2 and 3). Data have two important features:

- They are material traces or representations of events and therefore are given in a physical sense (from the Latin *datum*, for “the thing given”), which can be passed on, stored, and made accessible to many people.
- They are regarded as relevant by a researcher, providing evidence with respect to the issue investigated.

What are or are not data depends on the research question. If the research concerns pupils’ use of language, their written work or a recording of their verbal utterances will be important data; if the research is about interaction with patients or clients, clinical notes may be the most important data source.

Characteristics of data

Three important characteristics of data are that they are selective, the selection of data by the researcher is theory-laden, and data are static.

- 1 Data can only represent events selectively: the audio recording preserves verbal utterances from the area within range of the microphone for the period of time during which it is in operation; the survey gets the opinions people give in answer to the questions asked. During the process of becoming data, either by being produced (for example, photos, transcriptions of interviews, memos) or by being selected (for example, pupils’ writing, work sheets, school rules), some aspects of reality are stressed as important or others are neglected. To some extent this happens on purpose, as part of interpreting the research question or choosing a particular methodology; to some extent it happens accidentally, as a result of the researcher’s unconscious prejudices, or

some known or unknown bias of the methods chosen, or some restriction in the research situation (for example, the timetable making it impossible to interview a particular pupil, patient, or client).

- 2 Whatever is produced or selected as data depends on interpretative processes by the researcher. The extent to which the researcher's interpretation contributes to the production of data can vary considerably. It is very slight if the researcher selects existing material as data because they seem important to the research question (for example, a letter to patients from the clinic selected as data for research into home-clinic links). But when the researcher transforms personal experiences into data, the degree of interpretation is much larger. For example, to produce a memo, an event is observed, interpreted (that is, conceptualized), and finally recorded in written form. Data coming into being like this are events that have been interpreted by the researcher; that means the events are reconstructed, even if only by being described in terms of meanings already familiar to the researcher. Those meanings can be from our knowledge or past experiences, or as part of formal or practical theories. Because of this, data that have been reconceptualized in this way are often called theory-laden.
- 3 Finally, data are produced from events and interpretations that occur at particular times and places. Once produced, they are static because events cannot develop after they happen. It is important to note that because by their nature data are static this does not mean that they cannot be revisited to see whether our records of events or interpretations are accurate.

The following example will illustrate these three features. Let us assume that a social worker who is studying her own practice decides to audio record a group therapy session. By choosing this method of data collection she has already expressed a certain view of the situation being investigated: it is seen as a linguistic interaction, with less importance placed on non-verbal communication or the thoughts of the people involved in the situation. In addition, where the audio recorder is placed and what sounds it is capable of recordings selects a certain section of reality that is marked as important in understanding the situation. For example, the audio recorder's position may pick up more of her talk, or of the clients'. In addition, depending on the type of microphone, sound is picked up within a nearer or farther radius, with the consequence that the observed reality is selected differently. What has been recorded can be listened to again and again, but the relationship between social worker and client that has been made storable by the recording may have developed in the meantime: the results of the analysis based on this material may

still be historically interesting, but may have become unimportant in understanding the current situation.

We can summarize: data typically provide us, as researchers, with access to the world external to ourselves that we are investigating. We take data as information about that world, but we must bear in mind that they are not the world itself, but only its traces. They are always chosen or constructed from a certain perspective, and are therefore—to varying extents—theory-laden. This would not matter if we could make ourselves aware of all the theories, prejudices, and biases involved in collecting and selecting data. However, we can only be aware of some of the theoretical perspectives contributing to the action research process or the practical theories that shape what we do, while others remain unnoticed or *tacit*, although they still shape our research activities. In any case, it is important for us to acknowledge and be aware of the way these forces shape our research. The practical consequences of these considerations are small but, at the same time, wide-ranging. As our insights are built on data that we have produced, which have been affected by our past experiences, knowledge, and theories, we must:

- Be modest in our claims and make clear the preliminary and hypothetical nature of our insights;
- Re-examine and further develop the situational understanding we have gained (see the section on criteria for judging quality in action research in this chapter).

M5.1 The ladder of inference

An aid to understanding the degree of reliability of data is the “ladder of inference” (Argyris, 1983). This ladder consists of four rungs or steps to be climbed one after another—like a normal ladder. Each rung of the ladder symbolizes data of a certain quality, and the difference in the extent to which the data are accessible to examination by people other than the action researcher.

The first rung of the ladder symbolizes data that can be regarded as relatively unambiguous representations of events, as they are accessible to observation. For example, with the help of an audio recording, we can check if the teacher has uttered the words quoted on the first step in Figure 5.1. The second rung gives an interpretation of the teacher’s words, which is shared by everyone in a defined cultural domain. We assume that the teacher’s utterance, “Anita, your work isn’t very good today,” would be interpreted as criticism by most people in a Western cultural context. The third rung contains individual interpretations, which are not shared by everyone because they contain a number of additional assumptions. Those

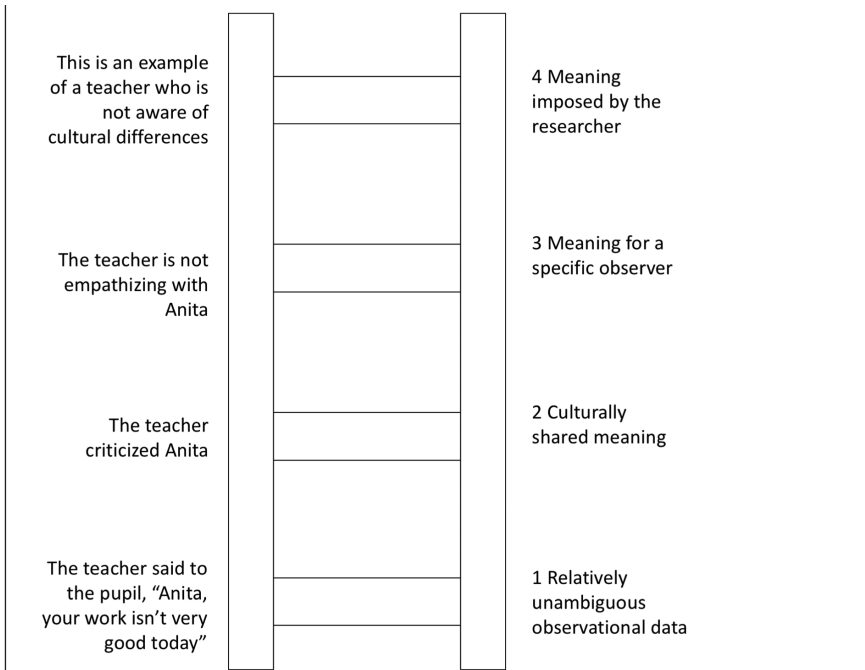


Figure 5.1 The ladder of inference.

assumptions are products of our experiences, knowledge, and practical theories. The fourth rung is the interpretation by the researcher. When we begin to make our practical theories explicit, or begin to use theories generated by others, such as action researchers or other educational researchers, we may impose those theories on our interpretation of the world. On the one hand, this imposition can be useful because it can help us to see things in new ways. On the other hand, it can act as blinders or blinkers that restrict our view and understanding of events and phenomena.

Television viewers in the US of a certain age may remember the television show *Dragnet* (Webb, 1951–1970). As Sgt. Friday sought clues to solve the crimes, he would remind witnesses to give him “Just the facts.” Clearly, Friday had a positivist perspective on the world in which he expected there to be one set of facts that would be indisputable. We know that different observers often see different “facts” in the same events, which was so wonderfully depicted in the classic movie by Akira Kurosawa (1950), *Rashomon*. In addition to “seeing” things differently, our interpretations also differ, and the more we go up the ladder of inference, the more likely different observers will interpret the same event differently. In order to minimize differences in the interpretation of events, we recommend the following:

- Start by examining the reliability of data on the lowest rung of the ladder by identifying which data are accessible to cross-checking by others. This does not mean that you need to cross-check the data; only that they could be. This helps to distinguish relatively unambiguous data from more inferential views.
- Move on to examining the reasonability of the interpretations on the second rung, asking yourself if others are likely to agree with your beliefs about what the event means.
- The first two rungs of the ladder are relatively easy to check for accuracy. The lowest rung consists of observations that could be made by others. The second rung can be checked against cultural norms. Because the type of inference made on the third is based on our experiences, knowledge, and practical theories, the only way to check it is by trying to convince others of the reasonableness, viability, accuracy, or validity of our interpretation.
- In some ways the fourth rung can be thought to be less inferential than the third, because it is based on established educational theories or explicit practical theories. However, these theories are somewhat removed from the context of the observed educational situation. Established educational theories have been developed to be generalizable, which by definition means that they are not specific to any one situation. Moreover, the process of making a practical theory explicit effectively does the same because one of the reasons for making it non-tacit is so that it can be used and tested in different situations. That is in fact what we do in action research—we use the highest levels of inferences to design action steps that will provide us with the opportunity to test whether or not they help to improve practice or improve our understanding of the practice situation. In some ways this could be thought of as going down the ladder. For example, if you want to judge the reliability of the interpretation on the fourth rung (“This is an example of a teacher who is not aware of cultural differences”), you could:
 - Try to get information about rung 1 (what was said or done?);
 - Find out if the interpretation of the data on rung 2 will bear scrutiny by others;
 - Then it is useful to continue the analysis, possibly identifying more than one alternative interpretation at the third step.

The ladder of inference serves three functions (Argyris, Putnam, & Smith, 1985, p. 56):

- It enables a careful scrutiny of interpretations based upon data drawn from a particular event.

- It clarifies the relationship between interpretations and more factual data.
- It facilitates reflection on action, by allowing us to trace interpretations of actions to the events to which they refer.

Can we say that the typical means of generating knowledge in research is through the collection of data, and that this distinguishes research from other activities? Unfortunately, we cannot draw such a clear line between research and everyday life, for the following reasons:

- 1 Data (as material traces and representations of events) do have a central position in the research process, but research results are not only and perhaps not even primarily dependent on the data. They spring also:
 - From the researcher's consciously formulated theories;
 - From the researcher's tacit practical theories based upon personal experiences (for which there may be no evidence in the data);
 - From the collective tacit theories of the researcher's professional culture (for which there may also be no evidence in the data).

In a similar way, all daily routines (for example, a nurse's work in a hospital or clinic) are governed by a mixture of conscious and currently unconscious knowledge (see Chapter 10).

- 2 Data also have a central place in our daily routines. For example, tests and other measures are used to gather data about our pupils, clients, and patients to assess their current status and their progress. Therefore, not every time that we make use of data is research.

We want to emphasize that data collection does not (and cannot) replace what we learn from everyday experience, but is based on it and should support it where this is useful. For example, data collection is particularly useful when we want to understand and cope with difficult situations in which we are not satisfied with our routine actions, or when we want to re-examine our practical knowledge and theories, develop it, and make it accessible to our colleagues (see also Chapter 10).

Data collection methods

Although there are many different ways to think about and engage in research about people and their educational situations, there is only a small set of types of methods that one can use to collect data. That is because the

data that we are interested in are those that help us understand who we are, what we do, and how we and other people interact with one another in educational situations. Therefore, we are limited to looking at what people do, examining what they produce, or asking them what they think. The first is done through observation; the second by inspecting what are called existing archival data; and the third through interviews, surveys, or questionnaires.

Before we provide some examples of these types of data collection methods, we want to give some suggestions on how to develop a data collection plan. Too often action researchers haphazardly begin the collection of data without giving much thought to why they need a particular type of data, what they expect to get from it, or even what impact the data collection process itself has on others. Asking people's opinions, especially in interviews, heightens their awareness of the issues under discussion and this is a form of action in its own right. It is also important to look at what types of data are readily available because they are generated as the normal part of your practice (what Calhoun, 1994b, calls existing archival data) and data that you generate through surveys, interviews, audio and video recording, and so on. Therefore, we suggest that you develop a data collection plan. It is important to remember that because of the organic nature of action research, your data collection plan will most likely change as you collect and analyze your data.

M5.2 The data collection plan

A way to develop a data collection plan is to do the following:

- First write down a statement of your problem, question, or needs.
- Then answer the following questions in order:
 - What do you need to know to better understand your situation and make decisions about your practice?
 - What types of data will provide you with the information that you need?
 - What types of data are already available to you (existing archival sources and other artifacts)?
 - What types of data do you need to generate?
 - What instruments will you need to generate and collect data?

Observing and documenting situations

Observation is a normal process. Every type of practice in which we work with other human beings entails continuously looking for answers

to practical questions: What is happening here? What does this situation “demand” from me? What happens if I act in a certain way? Will the situation develop the way I expect? These observations are normally intuitive and unfocused. Professional action requires an “eye for the whole situation” (a kind of intuitive “seeing” that is different from a carefully aimed “looking”). However, this kind of “seeing” has some drawbacks as a basis for developing professional competence. For example:

- It is diffuse: the focus is wide-ranging, details get lost.
- It is biased: observations are acted upon with a minimum of reflection. There is a danger of seeing “what one wants to see.”
- It is ephemeral: observations are only held in the memory for a very short period of time so that it is difficult to subject them to detailed examination.

These weaknesses can be overcome by using systematic observation procedures. Diffuseness can be countered by observing something specific for a particular purpose. Bias can be controlled if observation is used to test assumptions. Finally, the ephemeral nature of “seeing” can be overcome by using techniques that “capture” events. There is the possibility that we lose our vision of the situation as a whole, so it is important that systematic observation procedures should not replace intuitive “seeing,” but rather complement and correct it.

Here are suggestions for trying out four ways of observing and documenting a situation: *direct observation*, *audio recording*, *photography*, and *video recording*.

Direct observation

Direct observation of a situation does not require any technical tools except a way to make a record of your observations, like paper and pen or a digital device like a computer or tablet. It can be thought of as a form of *participant observation*, a well-known method used by anthropologists and ethnographers (Fetterman, 2010). Normally, participant observers are professional researchers who become part of social situations in order to investigate them. However, for action researchers, their prime focus is improving and understanding their practice, not just observing it. When action researchers observe their practice systematically, they are taking on a second task that sometimes fits in with their practice but may sometimes conflict with it (Wong, 1995).

When your practice requires your full attention or emotional involvement, it is difficult to achieve the “distance” necessary for systematic observation. There is strong pressure either to abandon the attempt or to introduce technical aids (for example, audio recordings). On the

other hand, there are times when some form of systematic observation is possible: for example, when pupils, patients, or clients are the principal actors in the situation.

The most important skill in observing is sensitivity to what is observed. Observers have to cope with a dilemma that is normally insoluble. On the one hand, reality is what is reconstructed from the observer's current understandings. On the other hand, reality has its own "stubborn" character that resists interpretation and reconstruction. This dilemma is only "solvable" by "double vision"—by being aware of one's assumptions and expectations and at the same time approaching each situation as if it were a totally new one (see Chapter 10). The temptation to make quick and simplistic assumptions about a situation based on one's own prejudices is very strong, particularly for a practitioner who is under pressure to take action. Refer back to M5.1 and the discussion of the ladder of inference.

In spite of these difficulties we believe that there are particular advantages in using direct observation as a method of data collection, in particular because it relates well to the complex processes of professional practice. In this section, we first give some ideas about how to prepare to observe, we then turn to making records of observations, and then to using others as observers of your practice situations.

Preparing to observe

Observation always involves selecting from a stream of events. So that this does not become a matter of chance, consider in advance the *what*, *why*, and *when* of observation:

- *What* are you going to observe? Is it the sequence of events, a pupil's behavior, or one specific aspect of your own behavior? The more limited the focus of observation, the more precisely it can be observed. However, the more limited the focus of observation, the more likely it is that the outcomes will only shed light on a small, possibly even minor, aspect of the original research question.
- *Why* are you carrying out the observation? What are the assumptions and expectations on which it is based? Observing is not merely registering what you see and hear; it is also a theoretical reconstruction of a situation. The observer's assumptions and expectations are theoretical tools for this reconstruction. They are his or her "prejudices" (pre-judgments), but striving for objectivity in observing does not mean that prejudices can be completely avoided; rather they should be clarified as far as possible, so that the part they play in producing an understanding can be taken into account at the stage of interpretation.

- *When will the observation be carried out, and how long will it take? It is particularly important for an action researcher to decide beforehand when it is likely to be possible to devote attention to observation.*

The simple method suggested below is a useful way of preparing to observe, both to increase sensitivity and to focus the observation on a chosen research question.

M5.3 Getting tuned in to doing observations

- 1 First, write down the focus for your observation (for example, “the level of pupils’ oral participation” or “the client’s physical demeanor during a counseling session”).
- 2 Write down what you would like to see in relation to this focus. (What kinds of evidence do you hope to get?)
- 3 Write down what you suspect you will probably observe (for example, “Only pupil A might ask a question without being asked”). In doing this, try to be as precise as possible (for example, “Pupil B is going to call out an answer without putting up her hand” instead of “B is going to behave badly”).
- 4 Choose one of the expectations listed above that relates closely to your research question and that you expect to be able to observe during the time you have chosen.
- 5 Decide what is the best way of writing notes of some or all of your observations (during the lesson or afterwards).

Recording observations

The main problem in direct observation is keeping a record for later use. The record can be made either during or after the observation.

Keeping a record during the observation

Time is a rare commodity for practitioners. It may save time to use an *observation protocol* with predefined categories. In the observation, each relevant event is then assigned to a category and thereby recorded.

Here is an example of what we mean:

As part of evaluating a new hospital-based clerical role (inter-professional care coordinators (IPCCs)), many of the staff, including the IPCCs, expressed an interest in a researcher shadowing the IPCCs at work, in order to find out what activities they were involved in and look at the similarities and differences in practice between the four IPCCs. I observed three IPCCs for three

days each, using an unstructured record writing down as much of what I saw and heard as possible. A second researcher was then allocated to observe the fourth IPCC and I wanted to make sure that comparisons would be possible between our records of observations. So I looked at my records for patterns and saw that a series of implicit questions had guided many of my observations:

- *Which IPCC?*
- *Who are they interacting with?*
- *Who initiated the interaction?*
- *What sort of interaction is it? Telephone? Face-to-face? Documentation?*
- *What are they talking about?*
- *What activity is the IPCC engaged in? E.g. giving information, gathering information, giving orders, taking orders, and making decisions?*

(After Bridges, Meyer, & Glynn, 2001)

The six bulleted questions in the anecdote above make up the observation protocol that the second researcher used. She may decide after using it and reviewing it with the narrator of the story that it needs to be revised to focus better on what they were trying to observe, or make it simpler to use.

A second example is of a teacher who kept a record of her interactions with her pupils.

A teacher thought that she might be paying more attention to pupils in certain sections of the classroom than to pupils in other sections. She decided to keep a record of the pupils she called on and to note in each case whether or not they had given any signal, such as raising their hands, that they wanted to be called upon. She made a plan of the seating arrangement in the class and marked a sign against the name each time a pupil was called on (for example, a "+" for "called after having given a signal" and a "-" for "called without having given a signal"). After a while a pattern began to emerge on the plan. During the observation she was already becoming aware that she called on some pupils more often than others. She responded by distributing her attention more evenly. Although this "distorted" the result it served the purpose of her investigation.

In this case, the "observation protocol" was the seating plan and the use of + or - signs to indicate whether the pupils signaled that they wanted to be recognized by the teacher.

This example illustrates the essential elements in using an observation scheme of this kind:

- Categories must exclude each other: for example, calling a pupil with/without a signal.

- There needs to be a protocol or instrument of some kind on which observations are recorded.
- There have to be rules for recording observations. In the example given above the rule was: whenever the teacher called a pupil she marked a sign against the name on the class seating plan.

The categories in the example can be related to the observed situation quickly and with a minimum of interpretation. This is very important if observations are to be recorded reliably without unduly disturbing the progress of a lesson.

Pupils can be asked to help with simple observation tasks. For example, an English teacher asked one of his pupils to mark each pupil's utterances on a class list during ten lessons. Afterwards the teacher compiled the results and found that the number of utterances during these ten lessons varied from pupil to pupil between 12 and 107. He was then able to talk to the three pupils with the lowest number of utterances and try to identify possible reasons and develop ways of increasing their participation.

There are a large number of protocols for direct observation (see Hook, 1995, and the numerous examples found online on the Internet). However, we believe that it usually works better for action researchers to design their own protocols, matching them closely to the purpose and subject of their observation. The existing protocols are usually designed for use by observers who are not practitioners and do not have to cope with any other demands in the situation. Consequently, they are often extensive and may require observers to be trained in how to distinguish categories correctly. By designing your own observation protocol, you can avoid these disadvantages. However, as the examples show, observation protocols provide only relatively thin information. They are most useful for an initial survey, which is then followed up by other methods (for example, memos of the observation; see Chapter 2).

Making a record after the observation

It is usually much easier for action researchers to make a record of the observation after the event, even though this may mean that some details will be lost. In most cases, you will not be able to write a full record immediately after the observation. However, the most important observations should be recorded as soon as possible, at least in the form of brief notes (perhaps in the form of a data summary, as described in M6.1) to make it possible to produce a fuller reconstruction at a later time.

One of the most important methods for recording observations is the "memo" (see Chapter 2). If the observations recorded after a lesson do not relate to single events but follow a research question over a longer period of time they will develop a diary-like character (see also Chapter 2). Other methods are suggested later in this chapter.

M5.4 Vignettes

A vignette is “a short piece of writing, music, acting, etc. that clearly expresses the typical characteristics of something or someone” (Cambridge English Dictionary, 2016b). The writing of a vignette can be used in action research to record a story about an event that is striking or surprising, which leads us to think about our practice differently or change what we do. It is similar to the slice of life (M2.2). Here is an example told by a secondary teacher:

I decided to investigate the quantity and level of difficulty of homework given to members of my class (11-year-olds) and began talking to Benjamin in “tutorial time” one day. He was considered one of the less able children but he became very animated telling me about making “sugar volcanoes” in Science: “We got ... some aluminum foil ... and we made a column cone-shaped with a pencil ... put it like a hole inside, the shape of a volcano, and poured some sugar into it and put them under the Bunsen burners ... and like lava come out! It was all different colors.” But he was worried about Science homework: “I don’t know if it’s effort ... it’s hard to finish all my homework and that ...” I asked if he could turn to anyone for help and he said he sometimes asked his Dad, but really his Dad expected him to get his homework done himself. When he came in from playing at about 9 pm he tried to do it in the bedroom he shared with his older brother who always had the TV on. It seemed that although he enjoyed Science, the work was too difficult for him, especially as his home background was not supportive. But then he said something else: “If I get homework before break I do it at break, or I do it at dinner time. So I don’t have to do so much homework at home. I get confused and that if I get a lot of homework. Like the last two lessons at the end of the day, I can’t do that at school, so I take that home and do it ... I get confused ... I remember quite a lot of it then, at school, see it’s not so long away from that lesson. See when you’ve been out at play and that you forget some.” Suddenly I realized that I had completely misunderstood the nature of his problem. It wasn’t so much that he couldn’t understand the work, as that he couldn’t remember what he was supposed to do. What I needed to do was to help him write down his homework and get him to practice reading it aloud before he went home.

Vignettes usually arise from surprising experiences rather than planned observations. Sometimes these are referred to as “critical incidents.” In reference to one’s practice, critical incidents are “mostly straightforward accounts of very commonplace events that occur in

routine professional practice which are critical in the sense that they are indicative of underlying trends, motives and structures" (Tripp, 2011, pp. 24–25). Tripp's definition highlights two ways in which the incidents are critical. The first comes from its use in history where it refers to some significant turning point or change in a person, institution, or social phenomenon. In the example above, the teacher wrote, "Suddenly I realized that I had completely misunderstood the nature of his problem." This sudden realization suggests this type of turning point or change. The second is the way in which "critical" is used in "critical theory." One of the goals of a critical theory is for it to uncover the structures and assumptions beneath the surface of social life to understand how they affect our behaviors and beliefs. The vignette above is not critical in this sense because the teacher did not seek to understand what were the underlying causes that resulted in Benjamin not doing his homework. While it would certainly help him to write down the homework, there are suggestions in how Benjamin described his home life that suggest other causes.

Because things have not happened as expected, the experience, or critical incident, stands out from the stream of familiar events. There is a discrepancy between expectation and reality that can help us to develop a new practical theory as the basis for changes in our practice. (See the discussion of discrepancies in Chapter 4.) Recording a surprising event as a vignette saves it from oblivion and makes it available for further analysis and discussion (perhaps in your research group, with your critical friend, or with pupils, clients, or patients). Writing vignettes is not difficult and is a good way of recording first-hand experiences by describing situations and kinds of behavior.

A vignette should contain the following:

- A description of where and when it occurred and the people concerned;
- Enough background information to give the context of the event;
- An account of the event: it should be written in a narrative form; important utterances (statements, answers, questions) made by the main participants should be quoted exactly in order to retain the authenticity and immediacy of the situation. The sequence of actions should be clear so that they can be easily imagined in their context;
- Some commentary giving the observer spontaneous understanding of the situation. It is important that this is clearly distinguished from the account of the event.

In the foreword to the most recent edition of his book, Tripp (2011) provides an overview of how to write vignettes of critical incidents and how to review and discuss them in a group.

M5.5 Selective observation using topic cards

If you are trying to observe your own practice, you may find it difficult to record observations until later in the day. When that happens we often find that we can't recall specifics or overlook possibly important events. This method provides a way to jog your memory by responding to carefully chosen questions by doing the following:

- 1 Write down on about ten separate cards some issues about which you want to collect data. As with some of the other Ms, you could note the issues or questions on a digital device. However, it would make it difficult to select them randomly as described in step 2 below.
- 2 At the end of the day shuffle the pack and deal two or three cards. Reflect on what has happened during the day in relation to these issues and write observation notes for each in your research journal. This should take no more than 10 to 15 minutes.
- 3 On each subsequent day deal a further two or three cards until you have written observation notes about each issue. Then start again from the beginning, possibly reshuffling the pack so that you take the issues in a different order.

What is special about this method is the combination of systematic and random elements of observation. During the day you know all the issues that may become the subject for observation notes, but you do not know which ones will be chosen when the cards are dealt at the end of the day. This serves to raise the level of readiness and sensitivity in observing. As time goes on connections emerge among observations. Some issues can be dropped if they prove unproductive and new ones can be included, for example, by splitting some of the existing issues into two (see Hook, 1995).

Using other people as observers

As paradoxical as it may sound, most people know too much to make good observers in their own situations. Observation requires a certain *naivety*, a *stranger's view*, an ability to see the unexpected and uncommon in daily routines and in what is considered "normal." As an action researcher you need to distance yourself from the situation.

Every practice situation can be seen from different perspectives:

- The practitioner's perspective—the practitioner is responsible for organizing what goes on in the classroom, clinic, or office, and will

tend to want to judge his or her work as more or less successful, according to particular aims.

- The pupils', patients', or clients' perspectives—they may see themselves in a number of roles, for example as partners (or opponents) of the practitioner in organizing and enacting what goes on.
- Another person's perspective—an outsider will want to experience the situation and understand it.

Knowing the perspectives of others helps practitioners to distance themselves from the situation. By acting as an observer, someone from your research group or a critical friend can provide a new perspective on your situation, if only by having different "blind spots" from you.

In addition, someone who is not actively involved in the practice at that moment is able to observe more precisely, having time to do it without any responsibilities. Such an observer has access to information that is not easily accessible to the action researcher and that may, on occasion, be hard to handle. For that reason, you need to choose an observer you can trust (see Chapter 3 for a discussion of trust in action research). Once trust is established you should not be content with trivial comments but ask the observer to describe in detail what he or she has seen. If you ask specific questions and/or define your expectations before the observation (for example, What does pupil A do in the course of the lesson? or, In what ways am I inviting students to participate in discussions or discouraging them from participating?) it is easier for the observer to focus attention on the events that are important to you and write observation notes that will be genuinely useful.

Ask the observer to give you written notes as soon as possible, and take time to look at these and consider what additional information you need. Writing notes requires the observer to impose an order on impressions and some things may have got lost in the process. If you talk to the observer about particular points, keep a certain distance and don't apologize for things that were "bad" in your opinion or try to justify yourself. If your perception deviates from the observer's, don't engage in any arguments (except perhaps to provide counter-examples without any comment) because the purpose is not to win an argument but to understand and learn as much as possible about another person's observations and interpretations. You may find it useful to look at the rules for analytic discourse (M4.6).

M5.6 Notes on observations

There are many resources for writing good observation notes, including books and webpages (Labaree, 2016). Some are specific to the type of observation (for example, classroom, patients, etc.) or purpose (for example, ethnographic research or pupil assessment). Here are some suggestions for writing good notes, based on a number of different sources.

- Be organized:
 - Set up your notebook, computer, or tablet so that you can separate direct observations (lowest rung on the ladder of inference, M5.1) from inferences about what you see and hear.
 - Use abbreviations that will enable you to record your notes quickly (for example, we use T for teacher, P for pupil not identified by name, PP for several pupils, initials for identified pupils, B for blackboard, HW for homework).
 - If there are more than a few people involved draw a sketch of the layout of the room and where people are located. Label the people and items so that you know who and what they are later, and use those labels as you record your notes.
 - Intensive observation for more than 30 minutes is very exhausting, so it is a good idea to alternate intensive phases with phases that demand less attention (for example, five minutes trying to note as much as possible followed by five minutes taking brief, summarizing notes). One way of changing the demands on your concentration is to change the focus (for example, observing one person in depth and the rest of the group more cursorily)
- Accuracy counts:
 - Each situation is unique so you only get one chance to observe it. Before doing your first observation, practice taking notes in a setting that is similar to your observation site.
 - Describe what happens as precisely as possible. Put quotation marks around what people say, and be as precise as possible about what they do.
 - Make sure to include enough information so that you don't end up making assumptions about what you meant when you re-read your notes.
- Reflect on your observation notes:
 - After the observation, record ideas, impressions, thoughts, and/or any criticisms you have about what you observed.
 - Note any unanswered questions or concerns that have arisen from your reflection that you might address in future observations.
 - Review your notes to clarify points, and correct mistakes and misunderstandings.
 - Write memos about what you have observed and why you believe specific events occurred.

M5.7 Shadow study

When an observer works alongside a practitioner there is the opportunity of carrying out a more precise investigation by using some additional methods of data collection, for example, *shadow study*. In a shadow study, the observation is concentrated *on one individual or a small group* and carried out over a longer period of time. Alternatively, the observation can be concentrated *on the experiences that an individual or a small group encounters*, so to speak looking at the world through their eyes. The observer shadows an individual or a group of pupils, patients, or clients, colleagues, or the action researcher, for perhaps a day or more. An example of a shadow study is given below.

Robinson (1984) observed a child during her first three days at school from 20 minutes before school started until 20 minutes after the end of the last session, and made detailed notes. His study showed that at first the child was keen to start "working" from the first minute of the day, but because she was made to do "admin" and boring repetitive tasks her enthusiasm quickly cooled. According to Robinson's interpretation: "Alienation begins as soon as pupils arrive at school." The study resulted in the headmaster and teachers restructuring the beginning of the school year.

While carrying out a shadow study the observer should be as close as possible to those being observed without being seen as a part of the group and without being involved in the pupils' work. However, a shadow study does not need to be carried out covertly. There may be occasions, for example, when observing small children, when the observer may wish to remain "hidden," but in many cases it is more ethical to discuss the study beforehand with the person to be shadowed and seek permission. This may also open up opportunities for a post-observation interview.

Audio recording observations

Audio recordings capture the sounds of a situation. Compared with direct observation some information is lost in an audio recording: in particular, the surroundings and all non-verbal communication (movements, facial expressions, gestures, etc.). However, a more complete record is made of the sounds than is possible in direct observation. There are two ways of using audio recordings:

- Recording complete activities or sessions, to give an overview or to help in identifying possible research questions;
- Recording interactions that are narrowly limited in time, and carefully selected to throw light on a chosen research question (for example, a

teacher explaining a concept to one child, a health care professional explaining continued care with patients, a session with the whole class revising a concept taught in a previous lesson, or a small group carrying out an investigation).

An example: a recording of a pupil–pupil interaction

After having dedicated three math lessons to the topic “movement tasks” a teacher wanted to investigate how pupils grapple with such problems on their own. The joint work of two pupils on a set of relevant tasks was audio recorded. In the following transcript, two students (Anton and Bernard) are working on this problem:

Peter has to travel 16km to the next village. His speed is 4km/h and he leaves at 8 o’clock. Peter’s grandfather has left half an hour earlier, as he can only walk half as fast as Peter. Where is Peter going to meet him?

B: *Hmm, difficult, isn’t it?*

A: *That is, Peter and grandfather ...*

B: *and Peter*

A: *v , t , and s . Speed of Peter was 4, the grandfather walks half as fast, therefore 2, the time ...*

B: *is x .*

A: *half an hour before Peter ... grandfather is x , Peter is normally x ; Peter is $x+$...*

B: *$x+$?*

A: *+30 plus $1/2$, plus $1/2$... and the distance?*

B: *16.*

A: *But you don’t know that. It’s s .*

B: *Why?*

A: *You do not know the stretch, where he meets him.*

B: *But the stretch that the grandfather ...*

A: *Where is Peter going to meet him? We don’t know that. Or do you know that? I don’t know it. (five sec.) Hmm. I must think it over. Now you say something!*

B: *That is not correct. The stretch is 16.*

A: *But how do you know that?*

B: *The stretch is always 16. That’s what the text says.*

A: *Look, why does it say, “Where is Peter going to meet him?” Well, the point where he is going to meet him, the time, that is what we would have to determine more exactly. Hmm. (five sec.) Now let us think it over. You know what we could also calculate? Let’s calculate how long—yes, that’s it—let’s calculate how long it takes Peter to go these 16km per hour, these 16 kilometers. We have already got that. Now let us calculate how long grandfather, yes, it must take him twice as long.*

B: *16. It takes Peter four hours, the grandfather eight hours.*

A: *Exactly. Yes, yes.*

- B: *Mmm.*
- A: *and the what's-his-name, Peter and the grandfather ... speed is 4 and 2. The time ...*
- B: *Er, is t. We have got that, the time.*
- A: *We already know the time he meets him. Eight hours the grandfather, so it takes Peter four hours. Seven and a half hours it takes the grandfather.*
- B: *He has left half an hour earlier.*
- A: *And the way was 16km. So, when did he meet him? After four hours, so after four hours Peter met him.*
- B: *But he could have met him before yet.*
- A: *No, after four hours he met him. Look, this is A and this is B. A and B. 16km. (A draws.) Half of it is 8km, and 8km there as well. Now let us have a look whether he would have met him before or after those 8km. So if he walks 8km, it takes Peter two hours. It takes the grandfather four, three and a half hours. (Murmur.)*
- B: *Aha.*
- A: *So 8 is grandfather's way and Peter's way. But they do not walk towards each other. If they had gone towards each other, we would have had it ... 2km per hour, time is half of it, and so the way is ...*
- B: *2 times 1/2 is ...*
- A: *$s = v \times t$, two times 0.5 is ...*
- B: *2*
- A: *... six minutes. It takes him six minutes for half an hour. But that's not correct. He walks 6km in half an hour.*
- B: *1km.*
- A: *But if he walks 18 then ...*
- B: *In half an hour he walks 1km.*

We recommend that you take a second look at the transcript so that you can see the richness of information it contains. As an illustration we put together some conclusions that we arrived at from reading the transcript (further information on the analysis of such texts can be found in Chapter 6):

- The pupils do not even try to find out what the task is about exactly.
- They concentrate on irrelevant information instead (for example, the length of the whole trip) and carry out routines, such as "You know what we could also calculate?" without checking if they are useful for the solution of the problem.
- They do not succeed in keeping separate the procedural steps; therefore, they fall back to the same moves again and again, even if they have proved not to be useful.
- They seem to have difficulties in differentiating the concepts of time, distance, and speed (at least with respect to the relationship between meaning and symbol), for example, "grandfather is x, Peter normally is x."

- In some passages, they appear to have difficulties with very common understandings, such as “He walks 6km in half an hour” (which “obviously” is impossible).
- Common understandings and formulas learned in school (everyday logic and mathematical schemata) seem to get in each other’s way.

Usually, people only remain conscious that they are being recorded for a short time, especially if it happens frequently. However, they are likely to be a bit less communicative than usual at first. The extent to which a situation is changed by an audio recording also depends on how the pupils, patients, or clients have been prepared in advance; how important they believe the recording to be; and whether or not they think the purpose is worthwhile.

Technical suggestions

When we first began making audio recordings we used tape recorders. When we wrote the second edition of this book we recommended small, digital audio recorders. At this time the ubiquitousness of smart mobile telephones means that almost everyone is carrying with them an audio recording device. Most come with an app (for example, voice memos) that can be used to make recordings, and audio recording apps with more features are readily available on the online app stores. The recordings can also easily be downloaded from the phone to your computer for transcribing. Whether you use a dedicated device or your phone, the audio recorder can be moved around with the researcher or placed on a table near the group to be recorded. To make high-quality recordings of a whole event (for example, a class discussion), you may need to use a microphone, perhaps suspended from an overhead light.

Much of what we do in our practice is unique to the time and place so it is important to make sure that the recorder is working. We recommend that you record a brief introduction stating the date, time, location, and other main points of interest. You should download the digital recording to your computer as soon as possible and give the file a name that clearly identifies it. It can help to create folders for similar recordings.

Suggestions for transcribing recordings

It is easy to make an audio recording and it actually takes very little time. The problems only start afterwards when you try to make use of the information. If you decide simply to listen to the recording, you will need to play it to yourself two or three times (preferably making brief notes) before you will be able to make any sensible use of the data.

For detailed study it is worth transcribing parts of the recording, although this is very time-consuming. Even for a good typist, the process of listening to the recording and typing what you hear can take three to four times the length of the recording. Because it takes so long, only relatively short extracts should be transcribed unless you are lucky enough to have some secretarial support. Recently, there have been great improvements in the accuracy of voice recognition software, which could aid in the transcription process. However, at this time we are not aware of any that can accurately recognize the speech of more than one person. Some people have been successful at listening to the recording through headphones and then speaking what they hear into a device that does audio to text conversion automatically. Again, many smart mobile phones come with an app that does this.

M5.8 Partial transcription of recordings

An economical way of making good use of audio recordings is to transcribe selected passages. We recommend the following steps:

- 1 Listen to the whole recording to get an overview.
- 2 Listen a second time and make brief notes of the structure: give each individual scene or phase of the recorded situation a catchword and note the corresponding numbers on the counter so that you can quickly relocate the passages.
- 3 On the basis of these notes select the sections that are important and relevant to the research question and transcribe these fully.

There is the tendency for people to leave out the first and, sometimes, the second of these three steps under time-pressure. However, these “savings” can cost a lot of time afterwards and reduce the quality of the action research. The first two steps are an important part of the process of constructing theory from the data. They also structure the work and enable sensible choices to be made about how best to reduce the effort expended on transcribing.

It can save a lot of time and space to use abbreviations and annotations when transcribing recordings. If you are using a computer to transcribe, you may even want to use features such as AutoText to automate the typing of common words or phrases. Here is a list of examples of abbreviations and annotations we use to save time and space when transcribing. You could adapt these as convenient to you. What is important is to have a system that is quick to use and consistent, so you know exactly what abbreviations mean when you come to read the transcript.

T	Teacher
Ca	Caroline (named pupil)
P	Unidentified pupil
PP	Several pupils
(inaud.)	Inaudible
(Let's add the 3?)	Words guessed because difficult to hear
(surprised)	Transcriber's note of non-verbal data (e.g., tone, laughter) or summary of an untranscribed passage
(. . .)	Words or phrases omitted
. . .	Short pause
(pause, 6 secs)	Long pause (in this case 6 seconds)
<i>this point</i>	Emphasized by stressing the word
as – a – result	Spoken slowly

M5.9 Observation profiles

In an observation profile, notes are recorded on a two-dimensional chart using criteria that closely refer to the research question(s).

A teacher who was researching how to organize role-play drew up the example in Figure 5.2. The profile has a horizontal axis, dividing the lesson into phases chronologically (before, start, rehearsal, etc.). The vertical axis sets out the things you are interested in looking at (children's activity, concentration level).

	<i>Before</i>	<i>Start</i>	<i>Rehearsal</i>	<i>Performance</i>	<i>Discussion</i>	<i>Clearing up</i>
<i>My activity</i>	Informal chat. Some direction of activity re-collection of equipment.	Semi-didactic discussion/lecture to ascertain the comprehension of particular part.	Helping with ideas and problems with equipment. Conveying information. Encouraging activity among those reluctant.	Watching. Helping with odd equipment and queries. Altering what happened by passing written messages to particular people.	Adding to ideas already brought up by Ros. Encouraging new ideas from kids. Helping to take vote on idea for next week.	Seeing that equipment put back, that room left tidy. Listening with half an ear to other ideas.
<i>Children's activity</i>	Seating themselves. Talking. Making enquiries as to the nature of the afternoon's activity. Moving about. Slow flow of children into classroom.	Some Listening. Some restlessly whispering. Some quietly carrying on with written work.	Heavily involved in preparing their ideas physically and mentally.	Watching with a high degree of intensity. Acting out their ideas. Janice and Susan acting as a link. Using me and Ros to confirm ideas. Acting on messages.	Quiet, controlled but very lively interest and contribution.	Some taking equipment back, some helping to clear up. A milling around and breakdown of activity.
<i>Noise level</i>	Fairly high	Low but mumbly	Very high	Extremely quiet except for actors. Quiet talk at breaks	Moderate	fairly high
<i>No. of children</i>	–	20 rally involved. 6–7 uninvolved	All except 3–4 opters out	All – either as audience or actors	All	

Figure 5.2 Observation profile (Adapted from Walker & Adelman (1975, 22–23)).

Profiles like these help with recording observations after the lesson, as the blanks on the profile stimulate the memory. Observation profiles can also be useful if another person takes the role of observer. By giving a profile to the observer, a teacher can indicate what he or she considers to be important. Profiles can also be used when analyzing transcripts of lessons and interviews.

Photography

“A picture paints a thousand words.” This is an exaggeration, at least in relation to action research, but nonetheless photographs capture aspects of situations that, although they can be observed, are more fleeting and more easily missed than verbal utterances.

What is the value of photographs for action researchers?

We have already discussed photographs as part of M4.3 and M4.11. However, they can be used throughout an action research project in a number of ways:

- To supplement observation notes or audio recordings of a situation: photographs bring back a holistic impression of what took place and where;
- As an aid to studying non-verbal aspects of situations and events;
- As a means of raising questions and stimulating ideas to find a starting point for research.

Photos are most valuable when used in conjunction with other sources of data (especially interviews and audio recordings). They can also provide access to other data; for instance, photographs make good starting points for interviews—participants may be stimulated to talk by the concrete character of pictures. “Tell me about what you were doing when this photograph was taken” has the advantage of being a fairly specific question while not being a leading question.

Taking photographs in a practice situation can be disruptive, but this can be minimized. It may help if the action researcher—or one of the participants—takes the photographs, rather than a visitor. Eventually the people who are part of your practice will come to see being photographed as a routine. Making the photographs available afterwards and discussing them with participants can further reduce any nervousness. If the photographer is not the action researcher it is very important for him/her to explain the purpose of the photographs carefully beforehand. Clearly, everyone in the practice situation needs to know why the photographs are

being taken, and how they will be used. Additional care needs to be taken if you include minors or other individuals from special populations. For example, permission from parents or guardians is usually needed before taking photographs of their children.

We began this section with the saying, “A picture paints a thousand words.” In actuality, a picture evokes not only many words, but also many interpretations of what it illustrates. We suggest, for photos that you believe have special meaning or significance, that you make explicit which “thousand words” you believe the picture “paints.” You can then compare your interpretation with those of members of your research group or your critical friend.

Technical suggestions

It is important to be able to take photographs unobtrusively and without any delay. The ease of use of most digital cameras makes them ideal for use in action research and allows for you and your pupils, patients, or clients to see the photographs instantly. Flash is obtrusive and should be avoided. The quality of photographs mainly depends on the quality of the camera. At this time, most mobile telephones come with built-in cameras that can take high-quality photographs.

As soon as possible after taking the photograph a data summary should be made (see M6.1), including a brief description and comments on the situation in which the photograph was taken. This contextual information is essential because the “frozen frame” nature of a photograph provides no information on what came before and after. Photographs should be labeled immediately (place, date, class, topic) and any necessary additions or changes made to the data summary.

Making video recordings

At first sight video recordings combine the advantages of audio recording and direct observation as well as providing a record of movement. However, they also combine the disadvantages of both. The main advantage is that a relatively holistic record is made of the situation—seen from the perspective of the camera. By representing the sequence of events in time, video recordings can make the context and causal relationships more accessible than other methods of data collection. Behavior patterns become visible, including the relationship between verbal and non-verbal behavior (audio recordings are actually better for analysis of verbal patterns alone). Video recordings are also an excellent way of presenting a situation to others to open up discussion.

Video recordings can be misleading because they give the appearance of being a complete record of events when in fact they are highly selective

(the camera has been pointed in one direction and there is no indication of periods of time when it has *not* been recording).

Making good use of video recordings takes a lot of time. A careful analysis concentrating on events that appear to be essential in terms of the research question requires repeated playing of the tape. Transcribing extracts (see M5.8) is more time-consuming and technically ponderous than transcribing audio recordings because pictures and sound together contain a lot of information and this makes it necessary to spend time sifting useful data from much of which is irrelevant.

If someone is operating the camera it is possible to use a range of shots, including close-ups and panning. However, it is usually counterproductive if an attempt is made to imitate the conventions of television. For the action researcher a broader view of the situation can be much more informative than a face that fills the screen “as on TV.” Sometimes a fixed camera is sufficient, positioned on a tripod at the (window) side of the room and allowed to run for the whole session without pause. It can be focused on a whole area of the room, on a group of participants, or on one participant. Recordings of this kind make rather boring viewing for people not involved, but they provide a more complete record of the session for purposes of analysis or discussion.

Sound is also a problem with video recordings. The radius of the camera microphones is usually too small to record a lesson involving a whole class, so an additional high-quality microphone is necessary. The positioning of the camera will depend on what is being researched, for example, focused on a group of pupils if group work is the subject of investigation. Afterwards, the file should be labeled immediately (location, time, subject, topic of investigation) and a data summary made, as with audio recordings.

You may find yourself wanting to make video recordings because of the ease in making simple ones using the camera in your mobile telephone. Given the technology available at this time, there appears to be two types of useful video recording that can be made using a phone. One is a close-up of one person or a small group of people engaged in a task. The other is a wide shot that could include an entire classroom, for example, so that you can have a record of interactions among the pupils.

The ethical considerations discussed later in this chapter, which are always important in collecting data, are more sharply focused when using video, because the apparently more holistic and authentic record of events increases the chances of invading the privacy of individuals and representing them in a way that goes against their interests.

Existing archival data

Action researchers have access to a variety of existing material that can be used as data. This material can provide evidence of past events relevant to

a research question. *Written documents* are the most obvious: for example, pupils', teachers', nurses', and social workers' written work; pupil attendance records and patient and client schedules; and grade, performance, and medical records.

There is also *unwritten evidence*: for example, the appearance of a classroom after the pupils have left, the cover designs and binding of books as well as their state of repair, signs of wear on the furniture, participants' demeanors, and so on. Here are two suggestions of ways to collect and use these existing data.

M5.10 Making a dossier

A dossier is "A collection of documents about a particular person, event, or subject" (Oxford Dictionaries, 2016). For example:

- A teacher can collect the work of a particular pupil in order to study his or her development (all the work, a selection of the best, or an arbitrary selection), or pupils can be asked to make a representative selection of their schoolwork. This type of dossier is sometimes called a learning portfolio (Zubizarreta, 2009).
- A social worker can keep records of appointments, types of sessions, phone calls, and so on to document a particular case.
- A whole class could put together a dossier of its work, first collecting all of the work and then selecting what is relevant for the dossier.
- A practitioner can document his or her activities over the course of a day, a week, or longer.

Here are two examples of using a dossier for research:

A French teacher wanted to study the mistakes most commonly made by low-achieving pupils in order to identify possible causes and develop teaching strategies to help overcome them. She collected the exercise books of a selected group of pupils and listed the mistakes they had made over the previous three weeks. She then analyzed the kinds of mistakes, their context, and frequency. The list provided clues to possible causes. She then handed out the list to the pupils and discussed it with them in order to get a more complete picture of specific causes and possible teaching strategies.

Jackie Bridges gives this example from nursing:

I was working in a practice development role with nurses on a rehabilitation ward for older people. Nurses had expressed difficulty in looking after older patients with cognitive impairment such as dementia. I was interested to see what proportion

of patients had this kind of problem, and so took a 'snap-shot' look at prevalence by reading through the medical and nursing documentation for all the patients on the ward at that time. Seventeen out of the 22 patients had cognitive impairment documented on admission to the ward, ranging from mild to severe and from acute to chronic. The nurses felt that this proportion of 77% remained more or less constant despite a high turnover of patients. This finding made the lack of support for nurses providing this type of care even more surprising.

(Bridges, Smith, Meyer, & Carter, 2001, pp. 33–34)

Dossiers are useful in many ways:

- As reference material to be used in discussions with pupils, patients, or colleagues, or with clients' family members or colleagues;
- As a data base for discussions on ways to improve work patterns;
- As a stimulus for pupils, patients, or clients to reflect on their work and behaviors to become more aware of their participation in their education or development. This often has the effect of involving all participants in the research process, by raising their awareness of their own practice situation and increasing the care with which they carry out their work;
- Family members who have access to this kind of dossier are better able to judge achievements, progress, and difficulties.

The action researcher as detective

It is often easy to neglect available data because they are embedded in everyday routines. They are so "normal" that it is difficult to notice them and they seem too banal to be taken seriously. We can learn from Sherlock Holmes. The secret of his method lay in his ability to detect clues in the most inconspicuous things. Dr. Watson had just bought a new surgery, choosing from two located in adjoining houses. Without even entering the building Sherlock Holmes congratulated him on his choice. He had discovered that the steps leading up to Watson's surgery were much more worn than those of the surgery next door.

Here is an example of how clues can be recorded and used in action research:

A teacher who was annoyed by pupils' careless treatment of the school furniture decided to carry out an investigation. He began by asking how the problem manifested itself. Where did it happen? How did it show itself? He began in "his" class and inspected the desks, the floor, the "designs" on the walls; then he inspected the halls, looking for signs of wear on the

windowsills, graffiti. He took photos of what he saw, and he also took photos of places where similar furniture, etc. was in good condition.

He used this data to start a discussion with the pupils in his class, not in order to “preach” but to find out their point of view and get more information about the situations in which damage occurred. This led to further speculation about contributory factors, such as how careless behavior was sanctioned: for example, many offences of this kind went unnoticed when older pupils were responsible but were punished when younger pupils were involved. He followed up with interviews to try to find out more about the reasons for the pupils’ behavior.

Clues can be used in other ways. Jinny Hay (2002) has provided us with an example of how social work professionals use clues within their daily practice that become part of their action research:

Social care professionals use “clues” within clients’ homes to build rapport and to open up new lines of conversation that offer new insights. For example, photos will offer the opportunity to ask about relatives and the relationships with the client. Music/the garden will offer the opportunity to explore existing hobbies and interests. All will help to build a picture of the persons and of their preferred lifestyle and current barriers to achieving what they aspire to.

Our reference to Sherlock Holmes and the use of clues suggests the metaphor of researcher as detective. This metaphor characterizes the researcher as someone who “searches for evidence about causes and effects. The researcher develops an understanding of the data through careful consideration of potential causes and effects and by systematically eliminating ‘rival’ explanations or hypotheses until the final ‘case’ is made ‘beyond a reasonable doubt’” (R. B. Johnson, 1997, p. 283). While Holmes is a familiar character, and his method of rational deduction based on the observation of factual clues is one that we are accustomed to, literature provides us with other ways in which detectives work that is not so steeped in the positivistic tradition. For example, Moring (2001) provides us with two other styles of detective work that can also serve as metaphors for research. One is the psychological profiler. She uses as her example a television show from her native country Finland, *The Profiler*. She suggests that readers from the UK may be familiar with a show called *Fitz*. Another familiar example is Clarice Starling in the movie *Silence of the Lambs*.

In contrast with Holmes’ deductive reasoning, “The Profiler is more sensitive to the social and cultural construction of social matters. Her goal is to understand the complex world of lived experience from the point of view of those who live it” (Moring, 2001, p. 354). To Moring, the research perspective that is the metaphor of the Profiler’s method is one in which the researcher seeks to interpret the world by paying attention to the situated and relational aspects of the experience or event. To an action

researcher who is this type of detective, clues are not separate facts; they can only be understood within the context of the educational situation and the relations among the people who are part of it, for example, the teacher, pupils, parents, community members, and so on.

Moring's (2001) other style of detective is represented by the character Daniel Quinn in the novel *City of Glass* (Auster, 1987). In the novel, "Internal and external reality are intertwined in a way that does not separate between the author, the narrative, and the social totality represented in the novel" (Moring, 2001, p. 355). As a result, we see Quinn struggling with a relativistic world in which facts, truth, and validity only make sense within their context and paradigm. When one does action research à la Quinn, rather than seeking to uncover facts and construct truth through scientific reasoning, the idea is to be immersed in the lived experience of practice, including "values, normative questions, feelings, and emotions" (p. 356).

Advantages and disadvantages of using existing data

Using existing data has some advantages over data collected through a contrived process. In most cases, it has higher credibility because it has been produced and collected independent of the action research activities. A further advantage is that because it already exists, it is available for use. Finally, it provides evidence of events that may not be accessible by other methods, including those activities that occur away from the researcher.

On the other hand, using existing data has some disadvantages. Often it contains much more information than necessary, making its analysis very time-consuming. Furthermore, even if the data were produced and collected independent of the action research process, there will have been other influences on the data that we either are not aware of or that cannot be reconstructed in sufficient detail. This makes interpretation difficult. Documents also contain mistakes, omissions, and prejudices, and can even be deliberately misleading: it is difficult to discover these flaws and to take them into account if the circumstances in which they came into being are no longer known. For these reasons it is important to combine this method with other methods of data collection through triangulation.

M5.11 Quick methods for data collection

There are many different ways that you can quickly collect data from participants (students, clients, patients, and so on) during or at the end of an activity or a session. These include the "2+2," the "Plus – Minus – Question Mark," the "Minute Paper," the "Muddiest Point," and the "RSQC2." We briefly describe each below, followed by a method for debriefing the information.

- 2+2. Participants are asked to briefly jot down on a piece of paper two compliments about the activity or session, and two suggestions for improving it.
- *Plus – Minus – Question Mark*. Participants are asked to make individual notes to three questions (three to five minutes).

Plus

- What did I like?
- What did I learn?

Minus

- What did I dislike?
- What was hard to understand?

Question mark

- What was left open?
- What kind of questions arose?
- *Minute Paper*. The Minute Paper is often used at the end of a class. The teacher asks pupils to answer these two questions: “What was the most important thing that you learned in this class?” and “What important question remains unanswered?” (Angelo & Cross, 1993, p. 28).
- *Muddiest Point*. The Muddiest Point can be thought of as an abbreviated Minute Paper. Participants are simply asked to respond to the question, “What was the muddiest point in the class?” (Angelo & Cross, 1993, p. 29).
- *RSQC2*. This technique consists of five steps: Recall, Summarize, Question, Connect, and Comment. At the beginning of the class or session the participants are asked to make a list of what they recall were the most important, meaningful, or useful points from the most recent session. They are then asked to summarize as many of the points as they can into one sentence. The next step is for the participants to write down any questions that remain or have come up from the previous session. In the fourth step, the participants are asked to try to connect their list of main points with what they believe is the major goal of their participation in the sessions. Finally, they are asked to write an evaluative comment about the class or session. It helps to provide them with sentence stems to complete, such as “What I liked the most/the least was ...” or “What I found the most useful/least useful was ...” (Angelo & Cross, 1993, p. 396).

Debriefing the quick method for data collection activity

The easiest thing to do after the participants have completed the data collection activity is to collect their answers and analyze them later. You may, however, find it more useful to debrief with the participants immediately following the activity. The method that we suggest for doing this provides relatively detailed feedback and stimulates participants to reflect on quality criteria. It also guarantees a kind of anonymity because only group results are communicated. You should allow at least 25 to 30 minutes to tap the potentials of this method.

- *Phase 1* Participants are asked to exchange their notes with two to four neighbors and to identify and discuss similarities and differences (circa five to ten minutes).
- *Phase 2* From each of these small groups, one member communicates the results. It is advisable first to call up any positive statements, whereby each group names only one. After several rounds of positive statements, the negatives are called up and finally the neutral statements or suggestions. The session leader writes them on the blackboard or makes personal notes. In this phase, the statements are not commented on.
- *Phase 3* The session leader asks for clarifications if necessary and comments on the statements.
- *Phase 4* All of these methods ask the participants to take the time and effort to provide the action researcher with honest and useful information that can be used for the improvement of his or her practice. It is important for the participants to get some type of signal that their responses were heard and will be made use of. We suggest that, as the final phase of this method, you debrief with the participants about what you learned from them and why it is important to you.

Interviewing

Interviews are basically conversations. However, what distinguishes them from everyday conversations is that the people engaged in the interview have specific roles. One is the interviewer—the question asker—while the other is the interviewee—the question answerer. The goal of most interviews is for the interviewer to get information from the interviewee about his or her knowledge, beliefs, perceptions, or experiences. There is really no other way to get this information except by asking a person to express their thoughts so that they can be shared with you. (Of course, this can be

done in written form as well as oral. We address this in the next section of this chapter.) While much can be learned by observation, behavior and its manifestations are ambiguous. Behaviors of our pupils, patients, and clients may mean something quite different to them from what it does to us. Questioning, orally or in writing, offers more direct access to their meaning than other methods.

Although interviewing provides access to what is in people's heads, even this access is limited. The interview, at its best, only brings to light what the interviewee thinks or is aware of. This consists of his or her interpretations at the time and under the circumstances of the interview. Even interviewees who wish to tell the "truth" will in some sense misinform the interviewer by leaving out information: they cannot be conscious of all the motives for their behavior and are engaged in their own process of reconstruction in answering the questions. That said, the interview can serve as a way to help the interviewee make explicit tacit knowledge or practical theories. Because of this, the interview can actually be a two-way street—both the interviewer and the interviewee can gain information and understanding through the process of asking and answering questions.

Interviews as a relationship among people

Interviews are communications that aim at getting to know points of view, interpretations, and meanings in order to gain greater understanding of a situation. The key precondition for the success of an interview is to make it clear to the interviewee that what he or she has to say will be important in at least one of three respects:

- What is important for the interviewer: the interviewee should feel that his or her views will "count" for the interviewer.
- What is important for the interviewee: the interviewee should believe that the outcomes of the interview might be useful for him/her.
- The interview can serve as a method of mutual growth in knowledge and understanding for both of their situations.

How can we set up the right preconditions for an interview? Watzlawick, Bavelas, Jackson, and O'Hanlon (2011) distinguish between two levels of communication: the level of content and the level of relationship. These levels influence each other: the relationship between two persons (for example, mutual trust; see Chapter 3 for more about trust) influences their understanding of what is said (the content). Vice versa, the interpretation of what is said influences the relationship. The interviewer can exert influence on both levels, but only to a limited extent. If a teacher interviews a pupil the interdependence of the two levels can cause problems: teacher

and pupil do not just build up a relationship during the interview, but have already developed various attitudes toward each other (on a continuum of trust and mistrust, affection and animosity). The same is true for social worker and client or nurse and patient. This framework of relationships provides the context in which the interview starts. It influences the way in which the interviewee understands what the interviewer says. For example, if the pupil sees the teacher as someone who is interested in answers to questions only insofar as they demonstrate what has been learnt (repeating what the teacher already knows), the interview questions will be viewed in that light: that is, the pupil will not assume that the teacher really wants to know something he or she does not yet know, for example, the pupil's own personal perceptions. This problem can be partly overcome by asking a third person who the interviewee does not know, or know well, to act as interviewer, for example, someone from your research group or your critical friend, and who will therefore have a better chance of building a new relationship during the interview.

If relationships between the action researcher and his or her pupils, patients, or clients are strained or difficult, a third person acting as interviewer can be indispensable in getting access to their perceptions and views. But, ultimately, the action researcher should do the interview. Although action research usually starts from the practitioner's research interest, in the course of time it should become a common concern of all participants in the practice situation. We do not only suggest this for ethical reasons, but also because it is our experience that the quality of understanding and potential for improvement are greatly enhanced if teachers and pupils, nurses and patients, and social workers and clients become research partners. An important side effect of establishing the kind of relationship needed to have good interviews is almost always a permanent change in the relationship between the action researcher and participants, which is likely to be supportive of the goals of the practice.

Preparing for an interview

The aim of an interview is to learn from one or more people what you do not yet know, but consider to be important. So, you need to reflect carefully on what you want to know and why. The aim is to decide upon the issues that will be the focus of the interview. We recommend that you formulate questions that are either central to the research question or that will enable you to reflect more deeply on sensitive issues. The set of preformulated questions is usually called an interview protocol. While it is important to have preformulated questions, you need not follow your interview protocol exactly. In fact, there are instances when preformulated questions can take your attention away from the interviewee and the dynamics of communication.

Most people are familiar with the highly structured interviews used by pollsters. These interviews have very specific questions and are followed exactly according to the protocol. They are done this way for several reasons. One is that they are looking for consistency across many interviews conducted by many interviewers. Second, by asking all interviewees the same questions it greatly reduces the complexity of the data analysis. A third reason is that some pollsters are influenced by politics or a particular ideology and construct their questions in ways that will give them the answers they want. Therefore, it is imperative that their interviewers follow the “script.”

There are also interviews that are almost completely unstructured. They may begin with a prompt like, “Tell me about your day” or “What was the most interesting thing that happened in your practice this week?” The interview then follows in the form of a conversation, with one person, the interviewer, tending to ask questions about the interviewee’s responses (Seidman, 2013). While there are reasons why an action researcher may want to use an unstructured interview, we find it more useful to do interviews that are *semi-structured*. A semi-structured interview begins with a set of preformulated questions. However, the interviewer can stray from the protocol, and more importantly, can ask follow-up questions that probe what the interviewee was saying. For example, the interviewer can paraphrase what he or she thought the interviewee meant by a comment and ask whether he or she got it right. In this chapter, we will only discuss semi-structured interviews.

Remember that both the researcher and interviewees will be very familiar with interviews on the radio, television, and Internet that vary from being confrontational to “cozy” and often have the explicit purpose of getting quotable “sound bites.” It is easy to slip into these familiar patterns, so careful preparatory work is important to make the purpose of the interview explicit to both parties.

The choice of the interviewee depends on the research question. For some questions it is important to interview several people who somehow differ from each other. For some questions individual interviews are more appropriate, for others group interviews. The group interview is a more normal situation for many people: the social pressure to talk is lower for the individual because of the presence of others, and if one person talks this can stimulate comments from the others.

A group interview is often called a *focus group*. In a focus group, participants are free to talk with other group members about the questions. A focus group allows action researchers to gather data in a more natural setting than a one-to-one interview, and can be used to get information about how pupils, patients, or clients relate to one another. The major drawback of a focus group is that because it allows for participants to interact with

one another directly, the interviewer can lose control of the conversation (Marshall & Rossman, 2016, pp. 153–155).

The choice of place and time for the interview also depends on the research question as well as on opportunity. Secondary teachers may be able to interview pupils during their unscheduled time if a colleague is prepared to release them from class for a short period. Primary teachers may be able to carry out interviews with the support of a colleague in a team-teaching situation. Sometimes interviews can take place during teaching sessions by setting tasks that require students to work independently of the teacher, either alone or in groups. Patients and clients can be interviewed during office hours or scheduled at other times.

M5.12 Preparation of an interview protocol

An interview protocol is a document that gives information about the structure of the interview and the set of questions that will be asked. When preparing an interview protocol, you should keep in mind that any kind of data collection, but especially interviewing, is an intervention into a situation. If you interview colleagues, senior people, administrators, clients, parents, or pupils, specific approaches regarding the content, formulation, and sequencing of questions may be important in order to gain their cooperation.

When you prepare the interview protocol you should pay attention to the following considerations:

- 1 Sources for questions:
 - Brainstorm improvement and research interests with your critical friend or research group, if possible.
 - Review your research journal and other data sources.
 - Review existing protocols in the professional and research literature, and on the Internet.
- 2 Sequence and structure of the interview:
 - Begin with an introduction (for example, purpose of the interview and ethics, including seeking consent), and end with a conclusion (for example, thanks, agreements);
 - Most likely you will have different categories of questions for different types of information. Use headings to separate it into different parts (for example, information about your action research, background questions, questions about topic A, questions about topic B, and so on).
 - In a semi-structured interview, you will want to have several follow-up questions that you can use depending on the interviewee's response to the initial question.

- Ask important questions sooner rather than later. As the interview goes on, you may feel like you are running out of time.
 - Make sure that the interview is not too long. We suggest keeping the interview below one hour, and better yet between half an hour and 45 minutes.
- 3 Test of the protocol
- Try out the protocol with persons who are comparable to the persons to be interviewed later and who are willing to provide detailed information on weaknesses of the design of the interview, such as your critical friend or a member of your research group.
 - Revise the protocol based on your test.
- 4 Preparing for the interview
- Make sure that you bring the interview protocol, a fully charged audio recorder, and either paper or an electronic device to take notes.

Carrying out an interview

Starting the interview

It is important to explain the purpose of the interview at the start and enlist the interviewee's help. This does not take long and is recommended for:

- *Ethical reasons.* It is not ethical to use the information from the interview for any purpose without the knowledge of the interviewee. In some circumstances you may need signed consent from the interviewee to satisfy the human subjects requirements of an institutional review board.
- *Reasons relating to quality of the information.* An interviewee who knows what it is all about is more likely (in most cases) to be able to give the information the interviewer needs.
- *Motivational reasons.* An interviewee who is treated as an equal and fully informed (becoming a kind of partner) is more likely to confide in the interviewer.

It is essential for the interviewee to be clear that the interview situation is different from other question and answer sessions with the practitioner. If they perceive the interview as a kind of exam they will probably only say what they believe the interviewer wants to hear. We recommend audio recording interviews for two reasons:

- The record of what was said will be more accurate than relying on memory or written notes; and

- You will be able to concentrate fully on the interview and not be distracted by having to take extensive notes.

It may not be possible to audio record: interviewees' permission should be asked and may be refused. If the interviewees are minors you will need permission from their parents or guardians. On some occasions, the audio recorder may make interviewees so nervous that continuing will adversely affect the quality of the interview. In this case, the best strategy is to take brief notes during the interview and use these to write more detailed notes later. It may help during the interview to divide your notes into quotations and other comments and observations, as this makes the subsequent reconstruction easier.

Listening

It takes two people to generate the information: one who tells and one who understands what is said. Communicating honestly about complex matters requires particular qualities of the listener: empathy, disciplined imagination, sympathy, attention, patience, distance, a feeling for truth, and willingness to understand (Sanger, 1996).

During an interview, listening is as important as asking questions. Non-verbal messages communicated by the interviewer's manner of listening are as important as the questions in indicating to the interviewee whether he or she is being taken seriously as a partner in the interview. These are some of the ways of showing seriousness and respect:

- By not interrupting trains of thought;
- By accepting pauses as a natural part of reflection;
- By accepting whatever is said, however unexpected and regardless of the interviewer's own views. This kind of neutral attentiveness can be difficult for many people: they may not be used to accepting statements with which they do not agree or, on the other hand, withholding approval when the interviewee meets their expectations. Both approval and disapproval of utterances can show the interviewee that the interviewer does not want to know what they really think but only wants confirmation of previously held views. This can lead to interviewees trying to gain the approval of the interviewer, perhaps by guessing what he or she wants to hear. Approval and appreciation should not refer to what is said, but to the interviewee's willingness to communicate.

Asking questions

The questions should make clear what the interviewer wants to know, while at the same time helping the interviewee to explore his or her

mental space. The beginning of an interview is particularly important because it establishes a relationship between the interviewee and the interviewer. It indicates to the interviewee the “real” intentions of the interviewer.

The first part of an interview is the introduction, which we described above. As part of the introduction you may want to ask some short questions about the interviewee’s role or biography. That serves as a quick warm-up, which can then lead into more open-ended questions like recounting an event and asking: “Why do you think that happened? What do you think lay behind it?” A personal approach of this kind shows that the researcher is interested in the interviewee’s opinion. It is important to ask open questions, especially at the beginning of an interview. They allow the interviewee to shape the answer and take responsibility for structuring the information. By telling the interviewee the issue and asking for comment, he or she is free to decide on the best linguistic form for presenting the ideas. This is another way of showing that it is what the interviewee thinks that counts.

Including many closed questions in the interview (where the format and structure of the answer is already predefined) could tell the interviewee (irrespective of what has been said beforehand) that the prime purpose of the interview is to confirm or disconfirm the interviewer’s expectations, or that the interviewer is not interested in any details. Closed questions are only useful if the interviewer knows exactly which answers are possible for a question and wants to cross-check possible interpretations. But if such questions (for example, expecting yes/no answers) open the interview the whole discourse can become a “(short) question and (short) answer” game. This can be avoided if you ask why they are responding in that way, or for examples that support their answers.

However, openness can also go too far, for example, if a bundle of issues is packed into one question. This may seem very open to the interviewer, but the interviewee will more likely regard it as a request to be superficial and get the impression that the interviewer wants to know a little about a lot, but nothing in depth. It is better to focus on one issue at a time.

Answers to questions can be either more descriptive or more interpretive. The balance is partly determined by the way the interviewer asks the questions. It may be best to shift the direction as time goes on. At the start of an interview, it is often better to ask for matter-of-fact and descriptive information, leaving room for more personal and interpretive comments when the necessary confidence has been built up. Questions should not be suggestive, and interviewers should not prompt to elicit particular opinions. Leading questions have negative consequences for the interview, as they undermine the credibility of the interviewer. Transmitting the interviewer’s expectations to the interviewee (sometimes without either of them being aware of it) is one of the most common pitfalls in carrying out an interview.

Expansion and clarification

The process of expansion and clarification is one way of showing the interviewer's interest in what the interviewee is saying. It demonstrates a desire to learn about details, clarify apparent contradictions, and so on. There are many ways of doing it:

- Repeat what the interviewee said in your own words to find out whether your understanding is in line with what he or she wanted to communicate ("What I'm hearing you say is ..."). This is especially important if the interviewee has difficulties with self-expression.
- Ask the interviewee to give an example as illustration.
- Ask for interpretations of causes, reasons, or aims.
- Ask for clarification of contradictions.
- Have a pen and paper to hand and ask for diagrammatic representations of some ideas.

There are some pitfalls. Attempts to expand and clarify can give contradictory messages: a request for more details can be interpreted either as a strong acknowledgement of the importance of what has been said or as an indication that you are questioning its truth. When expanding and clarifying, it is important to make clear that you are neither interested in finding fault nor in confirming your own prejudices, but in understanding.

After the interview

The most important task after the interview is preparing the data for further analysis. If the interview has not been recorded, the interviewee's statements should be reconstructed as literally as possible with the help of the notes taken during the interview (the sooner this is done the better as it is remarkable what you can remember within 24 hours). If the interview has been recorded you should label the audio file (interviewee, place, date, topic) and write a data summary (see M6.1). Sometimes it is useful to transcribe some sections of the interview (see M5.8).

Some suggestions for learning how to interview

Learning how to interview is more about learning an approach than a set of techniques. One way to do this is to observe someone else doing an interview. If your critical friend or a member of your action research group has expertise in interviewing, ask him or her if you could come along and watch how he or she does it. Of course, the interviewee would have to agree to this. You can also review interview transcripts and analyze how the interviewer and interviewee influence each other. You can

also review and analyze videos of interviews that you find on the Internet or record from television. The most important way of learning, however, is through preparing, carrying out, and analyzing your own interviews. M5.13 contains some suggestions.

M5.13 First attempts at interviewing

Here are some suggestions to keep in mind as you prepare to do your first interviews.

- 1 Write notes on issues or questions that spring to mind from your own practice: pleasant or less pleasant experiences, hopes and fears, wishes and plans.
- 2 Ask a pupil, client, patient, or colleague with whom you have a good relationship to let you interview him or her.
- 3 Explain to interviewees that you want to both improve and better understand your practice, and for that purpose you need to see things from their point of view. Tell them that you want to record the conversation because otherwise you would have to take written notes. Remind the interviewees of their rights as a participant in your research. It may also be necessary to seek written consent before you begin the interview.
- 4 Give the person whom you are interviewing your own impressions of the part of your practice situation that is relevant to the interview. Then remind him or her of one or two events that took place recently that had pleasant and/or unpleasant features.
- 5 Ask the interviewee to tell you his or her impressions of the situations.
- 6 Be careful not to interrupt interviewees while they are talking and to give them time for pauses. If they stop talking repeat their last statement and ask for more details (or for an example), but leave sufficient "wait-time" so that they can think about their responses.
- 7 If you have time for more questions you might ask them what they think your aims are in the situation, and how they view them or what kind of difficulties they (or others) experience in your practice.
- 8 Your final question should often be, "Is there anything that you think I ought to know about ... that I didn't ask you about?"
- 9 Thank the interviewee at the end and ask him or her for suggestions of whom you might interview next.
- 10 Write brief notes of your experience in this interview and what was striking about what you found out.

- 11 Listen to the recording several times when you have time to relax. Try to get a feel for your own contributions, for their influence on the interviewee, and for how his or her statements influenced your questions. Make notes on what you have noticed. Compare these notes with the ones you wrote immediately after the interview (has anything changed?).
- 12 Now have a critical look at the suggestions for interviewing earlier in this chapter and compare them with your experience.
- 13 It can also be helpful to play the interview to a colleague and ask for comments. Probably by now you will notice much more than your colleague, but in spite of that, someone not directly concerned may be able to hear things you have failed to notice. Make sure that you pay attention to promises of confidentiality.
- 14 Before doing your next interview re-read your notes on the first interview before you begin.

M5.14 Standard interview questions for the analysis of classroom action research

These questions can be used for interviews with teachers and pupils, or for lesson observations, as follows:

- To start a discussion on teaching without pre-empting the outcomes in any way;
- To explore ideas about teaching before deciding on a clearly defined research question or starting point; or
- When trying out interviewing for the first time.

If you are interviewing a teacher these are “standard questions” that you might ask before a lesson:

- 1 *What are your aims in this lesson?*
- 2 *What do you expect to be problematic in this lesson?*

You can also ask the teacher these questions after the lesson (What were the aims? The difficulties?). Or you can adapt them for pupil interviews:

- 1 *What do you think were your teacher’s aims today? What did your teacher want you to get out of this lesson?*
- 2 *Were there any parts of the lesson where you got lost? Or bored? Were there any parts of the lesson that you particularly enjoyed?*

These apparently simple questions often lead to profound discussions of teaching because they are quite open and allow the interviewee plenty of opportunity to explore ideas. They can, of course, be easily adapted for other situations.

Sample interviews for different practice situations

Example interview protocol used in a nursing action research study

This interview was developed by a group of five nurses who wanted to improve the discharge preparation process for children with respiratory problems. Part of their method was to interview parents about their perceptions of the discharge process. They developed the following interview, which they held face-to-face with local parents and by telephone for those who lived further away (Suderman, Deatrich, Johnson, & Sawatzky-Dickson, 2000).

Interview questions

- 1 *Can you tell me how you (your family) managed after (child's name) came home from the hospital?*

Probes:

- a *Could you tell me more about that?*
- b *Did you have some help?*
- c *Who helped you?*
- d *What concerns or questions did you have over this time?*
- e *What were you feeling?*

- 2 *When you think about the time when (child's name) came home, what things do you remember most?*

Probes:

- a *What was most demanding?*
- b *Did you change your routine? How?*
- c *Did you have the supplies you needed?*
- d *How did that make you feel?*

- 3 *Were there things you wished you had known more about?*

Probes:

- a *Where did you learn about these things?*
- b *Who told you about these things?*
- c *Was that easy or hard to learn?*

- 4 *How is (child's name) today?*
- 5 *Is there anything else you would like to comment on?* (Suderman et al., 2000, p. 4)

There are several things that we'd like to point out in this interview protocol. First, it is short—there are only five questions. If an interview has too many questions the interviewee may feel harried or harassed, and speed through the answers without giving them much thought. Second, three of the questions have probes—these are supplemental or follow-up questions that the interviewer asks in case the needed information did not come out as a result of the main question. If the information does come up, there is no need to ask the probing questions. Third, we believe that all interviews should end with a question like number 5. A variation of it that we prefer is, “Is there anything else that you would like to tell me about that you think is important but which I haven't asked about?”

Example interview protocol used in a social care action research study

The following interview was developed by Jinny Hay (2002) as part of her social work practice to gain information from clients about the ease or difficulty in receiving help, and the quality of the services that were provided.

- 1 *How did you find out about the Social Services Dept.?*
(Friends, family, neighbors, previous contact, other organizations, phone book, etc.)
- 2 *How easy was it to make contact with them?*
(Was phone number easy to find? Did you have difficulty getting through? Were you dealt with quickly? Passed to another person? Did you leave a message? Did they call you back?)
- 3 *Were you able to ask for help easily?*
(Were you reluctant to seek help from the agency? What made you decide to make the contact?)
- 4 *How were you able to make your concerns/situation understood?*
(Did you feel you were being listened to? Did you understand what you were being asked about yourself and why? Were the questions you were asked relevant to you? Was your urgency understood and noted?)
- 5 *Did you feel you were clearly told about and understood what would happen next?* (Referral to Assessment Team—and time scales?)
- 6 *What help and information did you get at this stage?* (Was it appropriate?)
- 7 *What did you do with the information?* (Was it followed up?)

- 8 *What help did you get from the organization/service you contacted?*
- 9 *If you did not follow up the advice/information did you contact the agency again?*

This interview protocol is a bit longer than the previous example but is still quite short. One of the things that we would like to point out is that the probes in this interview are suggested and will not necessarily be asked by the interviewer. That is, if the initial question elicits the type of response sought, then there is no need to ask the follow-up, probing questions. The inclusion of optional probes in this interview suggests that the interviewer has more latitude in changing the interview than in the preceding one. That is, if the interviewee makes a comment that is interesting or unexpected, the interviewer could invent new questions to probe more deeply into the interviewee's ideas, beliefs, or conceptions. Of course, the interview protocol is yours—you should feel free to change it in any way that you would like to meet your needs. You may find that the probes that you first came up with don't provide the information that you want, or that the interviewee may say something about which you want to ask additional questions.

Sources of misinformation in interviews

A basic criticism of interviewing as a technique is that what people say they do is not always the same as what they do, or what they intend to do (either consciously or subconsciously). If intentional misrepresentation is excluded, there are many other reasons for misinformation, for example: selective memory, rationalization, difficulty of the topic, personality and status of the interviewer, the presence of an audio recorder, and the social and environmental framework in which the interview takes place (often very different from normal conversation).

Some of these problems can be addressed as follows:

- When people contradict themselves it often indicates a tension in their thinking. Talking about the contradictions can sometimes resolve them.
- Pauses indicate that the speaker is thinking or that something is being left out. Careful questioning, without interrupting the train of thought, can help to stimulate the interviewee's memory.
- An important method for avoiding distortions is to ask for details (What did you do? What did you say?). Because of our background knowledge, we can easily jump to the wrong conclusion and fail to ask any further questions, believing that we already know the answer.
- Misinformation can be reduced by confronting interview data with other data (for example, observation notes), or by comparing accounts

given by different people (see the section on Triangulation at the end of this chapter).

There is also a deeper reason for distortions in interview accounts: interviewees are not always sure how to interpret situations, or why they have done certain things. The interview can be an opportunity for them to understand the situation better. This illustrates a more general point: interviews are not only about collecting data; they constitute a more or less meaningful, more or less conscious learning process for interviewees. The interview creates a framework within which the interviewee is made to think about a situation or issue and interrelate experiences, thereby potentially gaining a deeper understanding. Collecting data in this way can contribute to a change of attitude and indirectly to a change in the situation itself.

Narrative data

It is said that people live storied lives (Bruner, 1986). What this means is that when we think about who we are and what we do, it is in the form of a story or narrative. Stories have a temporal flow, with a beginning, middle, and end. Often the story is centered on some important event, experience, or crisis that resonates with us in ways that are important to us. If stories are such an important part of being human, then it makes sense to somehow use them to understand who we are and what we do. This process is called narrative inquiry (Clandinin & Huber, 2010; Connelly & Clandinin, 1990; Walker, 2007).

Narrative inquiry usually begins by participants telling stories. This happens during an interview or a conversation. It is also possible for the participant and researcher to construct a story as life is being lived. This can happen through a series of interviews or conversations over time. These stories are the “raw data.” Sometimes the story-telling is triggered through the use of memory prompts such as photographs, videos, or other artifacts. The researcher constructs a text from the story, which is then analyzed (see Chapter 6).

Much of the narrative inquiry in educational research and the social sciences is research done on the other by collecting narratives and then analyzing them, as described above. This type of data can be useful to someone who is engaged in action research on their practice. For example, stories written by pupils about their experiences of learning in the classroom, or young people who had “experienced significant areas of disadvantage in their lives, including family breakdown, state care, disrupted education, and homelessness” (Kearns, 2012, p. 24) telling their stories to the action researcher, or patients describing their daily activities as they live with a disease or disability can be ways to

become familiar with how our practice affects their lives and who they are. But it is also possible to write autobiographical narratives that can serve as data in action research (Attard, 2012). The narrative could be developed from your research journal, or even by having someone else interview you. The constructed autobiography then becomes a source of data for understanding and improving your practice and your practice situation.

The written survey

As we noted above, the only way to find out what people think or believe is to ask them. The interview is one way; the written survey is another. In some ways it is just a written interview. The most important difference is that in a survey the interviewer cannot respond immediately to the answer or specify new questions. Another difference is the type of question that is asked in the survey. Surveys can contain both closed and open-ended questions. Close-ended questions can be multiple choice, ranked, or Likert-type (Likert, 1967). Open-ended ones are similar to the types of questions asked in an interview. It is also possible to have short-answer questions that can be answered using just a few words, a phrase, or one sentence.

Compared with interviews that are often seen as difficult, hard to organize, and time-consuming, questionnaires seem to be a quick method of collecting data, easy to develop and administer without any problems. This widespread impression is not quite correct. The usefulness of a survey depends principally on the quality of the questions, as follow-up questions are only possible in a limited way, if at all. There is a tendency for action researchers to think of a survey or questionnaire as a first step in data collection. As we have already noted, good data are difficult to get unless you have good questions. There are obvious pitfalls to be avoided like asking “double questions” where it will be impossible to interpret the answers. For this reason, a survey should always be piloted with a small number of people who resemble those who will be surveyed as closely as possible.

It is also often difficult to get people to complete questionnaires. For example, we found that putting survey forms in colleagues’ mailboxes results in so few completed and returned that we may as well have put them straight into the recycling bin! Therefore, we suggest that you ask respondents to complete questionnaires or surveys when they are “captured” in some situation like a staff meeting or class. What this also suggests is that it can be difficult to ask the same people to complete a second questionnaire. For these reasons, we suggest that you carefully plan out your survey based on your data collection needs before you ask others to complete it.

Even if the questions have been well formulated so that they are understood as intended, the insight gained with the help of the survey

is often much smaller than expected. In general, the more structured a method of data collection is, the more formal and meager in content are the answers. In spite of this basic problem, surveys can be useful to action researchers. Roger Pols was a teacher who participated in an early action research project (The Ford Teaching Project, Elliott, 1976). He used the following simple questionnaire to investigate how his pupils (ten-year-olds) were coping with group work. Notice that all but the last two are closed-ended questions. While Roger used this as a written survey, it would be very easy to make it web-based by using any of the survey software and apps available for free or at low cost.

Questionnaire on group work

Please underline the answer you want to give. If you are not sure, underline the answer that comes closest.

- 1 How much of the lesson did you enjoy? All of it/Some of it/None
- 2 How much do you think you learnt? Nothing/Something/A lot
- 3 How much did you understand? Most of it/Some of it/Nothing
- 4 Could you find the books, information, and equipment you needed?
None/Some of it/Most of it.
- 5 Did other people help you? A lot/A little/Not at all
- 6 Did other people stop you working? A lot/Sometimes/Not at all
- 7 Did the teacher help you? Enough/Not enough
- 8 How long did the lesson last? Long enough/Too long/Not long enough
- 9 What was the lesson like? Boring/Interesting
- 10 Did you need anything you could not find? Yes/No
- 11 Where did you get help from? Teacher/Group/Someone else
- 12 How did you find this work? Easy/Hard/Just about right
- 13 Write down anything that made it hard for you to learn.
- 14 Write down anything you particularly enjoyed about this lesson.

Roger's aim was to learn what the pupils' opinions were of (1) the task, (2) their success with it, and (3) the conditions (material, time, help from the teacher and classmates, distractions). His immediate purpose was to improve the planning of the next lesson. In the long term, he wanted to find out which changes, if any, take place when group work is done more frequently. He asked the pupils to complete the questionnaire (in about five minutes) after each group work session. The quantitative analysis took him half an hour. One of the findings was:

At first 63 per cent said they were only hindered a little compared with 48 per cent at the end, while none said at first, they were hindered a lot, but by the end this had risen to 16 per cent.

Roger commented on this result:

Left to their own ideas, some children are not capable of working without direction and become a distractive influence. They therefore need direction—but in a large class inevitably some children must wait.

One of his long-term conclusions was:

There is a need for a careful plan and structure as well as resource material for the less-able children to keep them from frustration if they are unable to cope with the tasks. (Pols, undated, pp. 16–18)

Suggestions for the design and use of surveys

There are many resources available in book form or on the Internet to help you with the design and use of surveys. We have collected the following suggestions, which we believe should be helpful.

Before starting work

Effort spent on thinking through the problem you want to investigate before developing the survey saves a lot of time and effort in subsequent analysis of the data. Consider in detail why you are asking these questions, what answers you expect, and for what you are going to use them. The more precisely you know your intentions in advance, the better structured the survey can be. Vice versa: the less you reflect beforehand, the less likely the questions will target what you want to learn, and the more difficult and time-consuming the analysis will be. Another reason for carefully thinking through the problem is that surveys ought not be too long. We're sure that many of you have agreed to complete a survey only to find out that it goes on and on and on ... Unless respondents are committed to providing you with good information, if the survey is too long they will not complete it and you won't get any of the information that you need.

Formulating the questions

A survey can consist of open or closed questions. If closed questions are used, the respondents choose the answers that apply to them; with open questions, the respondent must formulate answers. In both cases a number of decisions have to be made when constructing the questionnaire.

Decisions on content

- Is the question really necessary? How useful are the expected answers likely to be in solving the problem?

- Does the question cover the topic? Will you need further information (more questions) to be able to interpret the answer? Be careful not to ask “two questions in one” as this makes the answers difficult or impossible to interpret.
- Do the respondents have the information they need to answer the questions? If you have doubts, no useful answer can be expected.
- If you ask for subjective information (opinions, attitudes), have you followed this up with a supplementary question asking for factual information? For example, the question “How informative was the debriefing for you?” can be followed by another question asking exactly what happened in the session.
- Questions concerning very personal, intimate, or taboo topics, or topics where personal interests or social pressures are dominant, tempt respondents to give an expected answer or one that will show them in a good light (if the question is answered at all). If you need to ask questions on these topics, it is useful to begin with a more general question. This situation comes up often in the health and social work fields, but can also be of concern to teachers. For example, a teacher may want to ask “What, in your opinion, do most pupils think about the new dress code?” before asking the student what he or she thinks about it.
- Does the way you have constructed the questions restrict the range of possible answers? For example, check that you have asked for both negative and positive experiences.

Decisions on the wording of questions

- Could the wording be misunderstood? Are the concepts easy to understand for all possible respondents?
- Does the wording suggest a particular answer?
- Are there any emotionally loaded words? These might have negative consequences for the validity of the answers.
- Does the question ask for a factual account or subjective opinions? Either is quite valid, but it’s important to know precisely what you are asking for in each question.
- Which is more suitable—a direct or an indirect question? Direct questions ask about a person’s opinion on an event or a situation, for example, “Did you enjoy the lesson?” Indirect questions ask for reactions to other people’s opinions, for example, “When he was talking to Sanje about group work Peter said, ‘I don’t bother to do much in group work because the others do the work anyway.’ What do you think of Peter’s statement?” Your choice between these two types of questions will be a tradeoff between possible bias and the efficiency of asking a question directly.

Decisions on the form of answers

- Should the questions ask for “multiple-choice” answers, short answers (closed questions), or freely worded answers (open questions)? Combinations of open and closed questions are often possible, e.g. “Do you prefer working on your own, with a classmate, or in a group (please underline your choice)? Why do you prefer to work in the way you chose?”
- In multiple-choice answers, are all the alternatives useful in relation to your research question?
- In multiple-choice answers, are all the choices clear and distinct from one another, and are all the important options covered? Notions like “generally” and “well” are ambiguous and difficult to interpret.
- Is it clear what kind of response is expected? For example, in multiple-choice answers, is it clear whether only one or more than one alternative should be chosen? This problem is eliminated in a web-based survey because questions can be designated as either one or the other.

Decisions on the sequence of questions

- Will the answer to the question be influenced by the content of the preceding questions?
- Does the sequence of questions allow the respondent to move gradually into the topic of the questionnaire? Factual questions should come at the beginning and questions asking for attitudes, feelings, etc., should follow later when the respondent has had a chance to focus as fully as possible on the situation.

Advantages and disadvantages of questionnaires using predominantly closed questions

Surveys can be a useful method of data collection for action researchers. Its most important advantages are:

- It is easy to distribute to people involved in your practice situation, including colleagues and family members.
- It need not take much time to fill in.
- A large number of individuals can answer the questions simultaneously.
- The impersonal nature of the survey and the possibility of answering anonymously make it easier to be completely honest.
- The social pressure on the respondents is not as strong as it is in an interview, which makes it easier for respondents to reflect on the questions before answering.

However, there are also disadvantages:

- There is no way of ensuring that questions are understood as intended. This problem can be reduced by testing the survey in an interview situation before it is administered, or by including more than one question on the same topic (to enable answers to be cross-checked).
- Questionnaires are not always taken seriously by everyone, particularly if the topic is not important to the respondent. Evidence for this can be seen in the way in which respondents answer:
 - In that yes/no or true/false questions are more frequently answered “yes” or “true;”
 - In selecting “middle of the road” answers rather than those that express clear views. This can be limited by not providing middle or neutral response options for questions.
- Answers may be distorted by factors of which the respondent is not at all or only partially aware. Attitudes and emotions are closely linked to self-image and self-esteem. This can lead to a subconscious tendency to paint a positive picture of oneself, or at least to avoid giving a negative impression.
- When questionnaires are not returned anonymously there may be a tendency for the respondents to confirm the researcher’s expectations (for example, in questions asking for information about an action researcher’s own practice).

These problems are equally true of the interview but are more easily recognizable through the personal contact between the interviewer and the interviewee. One important way to reduce these disadvantages is to win over the respondents to the aims of the research. For example, if the patients understand the reason for the research and are interested in its outcomes, a survey can produce very reliable data and, at the same time, make a contribution to improving the situation. A survey can also raise participants’ awareness of issues for further research.

Surveys and questionnaires can also be administered through the Internet. However, it is important not to send out questionnaires without prior agreement from the survey group, as unsolicited emails are regarded as a nuisance and may either be ignored or classified as spam and bring your research into disrepute. At this time there are companies that provide the resources for developing and administering web-based surveys for a small fee. Some even offer a no-cost option for short surveys with small numbers of respondents.

Collecting data as part of daily practice

Data are also available from practitioners’ daily practice. In health care, one of the first things done is to take a patient’s case history. It can also

be easy to adapt regular practice to generate relevant data. Open essay questions can be used to collect pupils' perceptions in the course of classroom work. For example, after an unpleasant argument with pupils as a result of disappointing work on a project, one teacher asked his pupils to write their reactions to the lesson for homework. The resulting writing was the most important source of data on this lesson, as these three examples indicate:

He (the teacher) practically roared. He asked every single pupil what she had done for the project. I said: "Questions" and he wanted to know "Which ones exactly?" Of course I couldn't remember exactly and didn't say anything. He said (loudly): "Well, this is great—saying nothing and then moping." I was very angry because I wasn't moping. But I hid my anger and didn't say anything, and I was sulking on purpose. I wanted to tell him what I thought to his face.

(Alexandra)

First I was very angry. How could he talk to us like that? He shouted at us and called us "schemers" and other names. I'll show him! But after a while I realized that the conflict was our fault too, not only his ...

(Kerstin)

I got angry when we were called "idiots of this day and age"—lacking in character, lazy, scheming, deceitful, mean, and whatever. That we would never find a job because we lacked character. Of course we realized that we had not done everything we should, but was it necessary to threaten to keep us back a year?

(Sabine)

Commenting on his pupils' essays the teacher wrote, among other things:

I was surprised at the words I had used according to my pupils. I was not aware of having used some of these words. I was also surprised that they had evoked such strong emotions. It was my intention to make them think about it and maybe even to hurt them. After all I felt hurt by their lack of work. But in fact I had only caused helpless anger and put many pupils into a situation where they had to reject me, because some of my expressions had damaged their self-respect.

(Schindler, 1993, p. 461)

One way of collecting data regularly on pupils' perceptions is the pupil's journal. Entries in a journal can be answers to open questions, for example, "What happened at school today that made you think?"

One primary teacher used journals both as regular homework for her six-year-old pupils and as a source of data for research on her teaching. She also started a dialog with some pupils by writing short comments after their entries.

A combined method: triangulation

One of the ways to increase the quality of action research is to use a method called *triangulation*. The term derives from the use of trigonometry by surveyors and navigators to locate objects. For example, let's say that a hiker is lost in the forest and makes an emergency radio call. One of the ways of locating the hiker is to use triangulation. One rescue worker, observer A, may determine that the hiker is to the south-west, while another rescue worker, observer B, may determine that the hiker is to the north-east. The hiker will be at the intersection of the two "lines of sight" (see Figure 5.3).

We can use the same strategy in our research. By combining different methods of data collection and/or data provided by someone else (for example, a member of the research group or a critical friend), we can better "locate" the meaning of our data. For example, triangulation may consist of a combination of observation and interview to get the perspective of our pupils, patients, or clients (Figure 5.4). It is important to note that for triangulation to work to locate the hiker, the two observers must know their locations. In the same way, the different data sources shown in Figure 5.5 should pay attention to the context of the practitioner's situation.

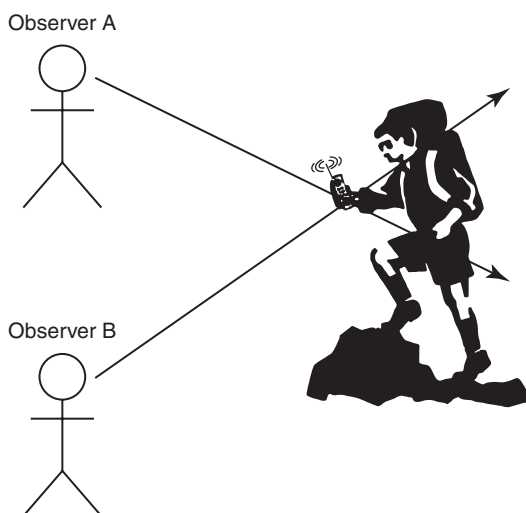


Figure 5.3 Using triangulation to locate a lost hiker.

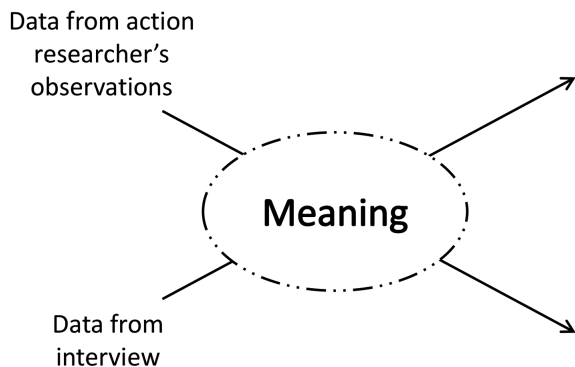


Figure 5.4 Using triangulation to better ensure the accuracy of our interpretations.

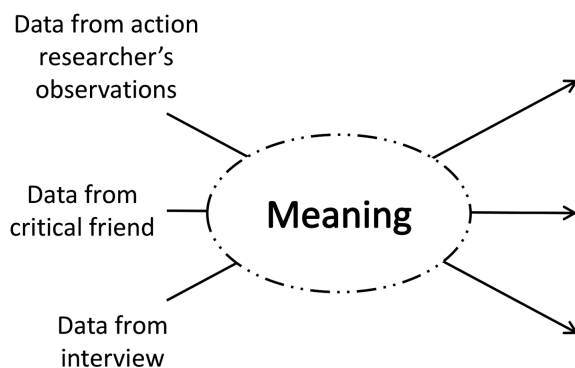


Figure 5.5 Adding an outside perspective increases the likelihood that we have “located” an accurate interpretation of the data.

When the perspective of the person who is outside of your situation is added, then there is even more reason to believe the meaning that you have attributed to your data (Figure 5.5). While triangulation can help to better understand or make sense of a situation, it does not necessarily tell us that its result is true or valid. Rather, it provides us with a way to produce a better account by making it richer, and more robust, comprehensive, and well developed.

Patton (1999) described four different kinds of triangulation or ways that triangulation can be used to improve the quality of the interpretation of data. They are:

- Methods triangulation, in which the analysis of data from different collection methods is compared, contrasted, and combined.
- Triangulation of sources—comparison of data that have been collected using the same methods but from different sources.

- Analyst triangulation, in which the action researcher and others, such as a critical friend or members of your research group, review each other's interpretations.
- Finally, theory/perspective triangulation—the use of multiple perspectives to interpret the data.

Methods triangulation can be time-consuming and expensive. Therefore, we suggest that you try to triangulate first with the other ways to do it, and then, if needed, use different types of data collection methods to collect additional data.

An example of triangulation

As teacher in charge of information technology in his school, Vince Moon (1990) wanted to try out and evaluate the use of computers and a video camera in a “Newsdesk” project with his class of ten-year-olds. “News” from a simulated press agency was printed out by the computer at random intervals (using the Newsdesk program). The children had to work in groups to handle the writing (on other computers), presenting, and video recording of a television news broadcast. The project was set up as a special activity taking a whole day. Jon Pratt, Vince Moon’s critical friend, helped with data collection. The teacher and the critical friend planned the day together, deciding on the aims of the activity and drawing up a list of concrete issues and questions and the focus for data collection. (They started with the “standard questions,” see M5.14.)

They decided to use three different data sources:

- 1 On the day, the critical friend observed the activities, spending part of the time taking notes and part taking photographs.
- 2 A short time later, the critical friend interviewed three pairs of pupils chosen by the teacher, using the photographs as a way of starting the discussion, as well as the original issues and questions.
- 3 After the lesson, the teacher used the issues and questions as a framework for writing detailed notes of his perceptions of the day.

In this way, they arrived at three sets of data: the views of the six pupils (as a partially transcribed interview), the teacher’s perception (in writing), and the observer’s notes. The data were then juxtaposed, enabling a comparison of the three different points of view to be the focus of the analysis.

The results were fed directly into plans for a second Newsdesk Day with a parallel class. The value of having three points of view became clear in analyzing the extent to which the teacher should structure the day: initially it was the teacher’s view that more structure had been needed to enable the groups of pupils to work more effectively, but the pupils felt it

had been important that they had been allowed to organize themselves. The critical friend was able to contribute his view that at one point an intervention from the teacher had come too soon and may have impeded the group's decision making.

See Sands and Roer-Strier (2006) for an interesting example of the use of triangulation in social work in their interviews of mothers and daughters.

Advantages and disadvantages of triangulation

Triangulation is an important method for contrasting and comparing different accounts of the same situation. Through identifying differences in perspective, contradictions and discrepancies can emerge that help in the interpretation of a situation and the development of a practical theory (see Chapter 4). In addition, where the different perspectives agree with each other, the interpretation is considered more credible (Sands & Roer-Strier, 2006).

Triangulation has the following advantages:

- It gives a more detailed and balanced picture of the situation.
- The contradictions that are often hidden in situations become visible, enabling a more profound interpretation.
- It breaks the "hierarchy of credibility," which limits our understanding, by giving equal status to people from different ranks. "Hierarchy of credibility" means that individuals of a higher social rank are more credible (reliable) than individuals of a lower social rank: the nurse is more reliable than the patients; the doctor is more reliable than the nurse; and so on. Triangulation regularly shows that pupils are able to help explain a situation by providing relevant information hitherto unknown to the practitioner.

But triangulation also has its disadvantages:

- Many practitioners see it as threatening. It obviously demands a high degree of self-confidence to confront your own perceptions of a situation for which you feel responsible (and which you feel is a "part of yourself") with other people's perceptions, and in doing so to question them. It seems that a neutral observer's perception is seen as less threatening than the people to and for whom we feel responsible. For example, John Elliott (1978) recommends teachers new to research not to begin with triangulation, but to start with less threatening methods of data collection, such as free observations recorded in a research notebook, or audio recordings of lessons.
- A further disadvantage of this method is the amount of effort required to set it up: a neutral observer has to be invited into the classroom and

data on the same situation have to be collected from three different sources. However, it can be helpful to focus data collection within a relatively short period of time—particularly as triangulation provides very rich data that are likely to take some time to analyze and interpret.

It is important for us to note that “triangulation” has a specialized meaning in the field of family therapy. In the model of family therapy developed by Murray Brown, triangulation is the process of including a third person when tension and anxiety become uncomfortable between two people (Bowen, 1978). While the idea of multiple viewpoints is common to both meanings of triangulation, its use in research is very different from its use in family therapy.

Criteria for guiding the quality of action research

In order to develop criteria for the quality of action research, we need to first make clear what are its objectives. In her historical review of action research, Noffke (1997) wrote about its professional, personal, and political purposes. Professional purposes focus on the use of action research to bridge the theory–practice gap by including practitioners in knowledge accumulation. For example, teachers, in collaboration with educational researchers, could study the ways in which certain pedagogical methods help their pupils learn content. While the teachers may improve their practice as a result, the primary purpose is to generate knowledge about student learning. The main benefits of engaging in action research from the personal perspective is for practitioners to gain self-knowledge and fulfillment in their work and a deeper understanding of their practice, and the development of collaborative relationships with their peers through researching together. Neither professional nor personal action research seeks to question the status quo or to transform it. To Noffke, this is the domain of the political, in which action researchers work to generate new knowledge, improve their practice and their understanding of their practice situations, and uncover the underlying causes of social injustice in order to make the world a better place.

Others have suggested similar ways to think about the purposes of action research. For example, to Grundy (1987), the purposes and methods of action research can be thought of as being technical, practical, or emancipatory. In technical action research, problems are defined at the outset and solutions sought. It can result in the development of theories, propositions, and hypotheses with empirical content. When action researchers use a practical orientation, they primarily seek to understand their practice situation in order to improve it. They acknowledge that human activities have moral and ethical implications, and that often one must deliberate on alternatives to decide how to action. To use an

emancipatory orientation is to seek to uncover the societal structures that coerce and inhibit freedom. Through the process of uncovering those structures related to one's practice, an action researcher can take action to promote social justice.

We believe that there are five primary objectives in action research:

- 1 To develop and improve practice through research in the interests of all those concerned;
- 2 To develop the knowledge and practical understanding of those involved in the research process;
- 3 To develop the professional knowledge of practitioners in your field as a whole;
- 4 To develop and improve your practice field (for example, education, nursing, or social work) as a discipline;
- 5 To engage in action research for the advancement of social justice.

Each of these objectives has directionality to it. That is, we have a vision and goal for the direction in which we want the practice and knowledge of our colleagues, other research participants, and ourselves to develop and improve. In the same way, we have a vision and goal for how we would like our field of practice to develop and improve as a discipline. We also have a vision of what a more just world would look like, and how that would be manifested in our practice situations. Given this we can talk about different quality criteria of action research based on how our action research helps us to move toward those visions and goals.

Before we turn to those criteria, we want to point out significant differences among the objectives. Objectives 1 and 2 refer to the practice situation; objectives 3 and 4 have a wider-range focus that includes all practitioners in your field and your practice field as a whole; and objective 5 begins with the widest vision but then brings it to the particulars of your situation. At first it may appear that because objectives 1 and 2 refer to the local practice situation, their quality criteria are, in a way, less demanding than those for objective 3 and 4, in which the knowledge that we construct will be used beyond our own situation. For those objectives we need to be able to convince others that our claims have meaning and usefulness beyond our classroom, clinic, or community. Therefore, we need to be able to produce strong arguments and evidence that we can use to convince others of the usefulness and veracity of the outcomes of our action research. Although all action research has moral and ethical components, action research that has as its objective transformation of practice situations so that they are more just also has political and emancipatory aspects. For the outcomes of this type of action research to be accepted by others, they both need to be convinced that the underlying reasons for unjust actions uncovered by the action researcher are authentic and that

the often difficult actions needed to transform one's practice are worth the effort and have the desired effect.

In a way what we're talking about here is the validity of the action research. Many action researchers have rejected the use of the term "validity" because of its association with quantitative research that uses statistical analysis of measurements. Given that these methods are seldom used in action research, it makes it very difficult to use criteria that are based on them. The idea of validity is also rejected because in many fields researchers try to ensure validity by making their studies repeatable and unbiased. Because action researchers are very much a part of the situations they study, it is impossible to remain objective in order to make one's research valid. In addition, because action research is done as part of ordinary practice, there is no way to develop action research studies that are repeatable in the same way as those in the hard sciences or some of the social sciences. However, there are other ways of defining validity. This definition, for example, can be used as a basis for the assessment of the quality of action research:

An account is valid or true if it represents accurately those features of the phenomena that it is intended to describe, explain, or theorize.
(Hammersley, 1992, p. 92)

We believe that it is possible for action researchers to do research that is of high enough quality for it to be considered "valid" according to this definition, and that, if that is done, we can meet all the objectives for action research that we listed above.

We now want to put forward four wide-ranging criteria that you can use to guide your action research so that it can meet your goals and achieve your vision. Here again we see the way that action research proceeds through a series of mini-action research cycles. You shouldn't expect that your initial research design would fulfill all these criteria. As you collect and analyze your data and take action in your practice situation, your starting point and research design will change. It is important to make sure that you are conscious of the way it is changing, and that as you make decisions about what actions to take or how to change your research design you pay attention to these criteria. We state them in the form of questions to facilitate their use in this way.

I Considering alternative perspectives

Have the understandings gained from research been cross-checked against the perspectives of all those concerned and/or other researchers?

Why do we believe considering alternative perspectives is an important criterion in judging the quality of action research? In traditional research,

reliability and validity are usually regarded as central criteria for judging quality (Creswell, 2013). Research findings are considered reliable if they produce similar results when repeated under similar conditions. They are valid if they accurately describe or explain the phenomenon being studied. Reliability and validity can be achieved by “repeating the research” (for example, having different people looking at the same event, using different research methods—interviews, classroom observations, etc.). It is also possible to make a detailed comparison at each stage. Discrepancies can be identified as they would be if a second photograph were to be superimposed on the original one. Any such discrepancies in the research process are interpreted as indicating quality deficits, and conformity as indicating quality (Altrichter, 1986a).

It is important for us to make clear that the criteria of reliability and validity as discussed above fall under what are called post-positivist epistemologies (Phillips & Burbules, 2000). Other traditions of research, which tend to resonate better with action researchers, such as interpretivism (Erickson, 1986) and the various forms of critical inquiry (for example, Gore, 1993), have their own quality criteria. That said, there are good reasons why the methods for assessing the quality criteria for traditional research are difficult to apply in action research settings.

- *For practical reasons*—(see also section 4 below, Practicality). Complex procedures for testing validity require time, effort, and resources that are not available to a teacher-researcher. Even considering alternative perspectives by drawing on a second observer may give rise to insurmountable difficulties in some cases.
- *For theoretical and structural reasons*—One of the important criteria for the use of repeatability to show reliability is that the research be repeated under similar conditions. Naturally occurring situations are usually changeable: it is seldom possible to observe comparable situations at different times because the situation will have developed in the meantime. In addition, because one of the most important aspects of action research is that we take actions in the system that we are studying, the conditions are always changing. In action research, you never step into the same river twice.

Our quality criterion of “consulting alternative perspectives” resides in the domain of interpretivist research, which is where we place much of action research. Interpretivist approaches to research can be described as naturalistic methods, such as interviewing and observation. They stress that it is important for there to be dialog between the researcher and the other participants in the research. In general, meanings emerge from the research process, and attention is paid to pragmatic and moral concerns. The central idea is that researchers, rather than trying to uncover facts,

seek to understand, make meaning, or interpret the situation. One way to do this is to consult alternative perspectives.

In practical terms there are several possible sources of alternative perspectives:

- Other people's perspectives—our own understanding of a research situation (as it emerges for example after clarifying the starting point of research, or after the first activities of data collection and analysis) can be confronted with other people's views. Clearly this is an important role of people in your research group or your critical friend. It can also be people who are directly or indirectly involved in the situation (e.g. pupils, patients or clients, colleagues, family members, or supervisors) or people who are relatively uninvolved (e.g. external observers).

A member check is one way that we can seek alternative perspectives from participants in our action research study. To do a member check we ask them if our interpretations of what they've said or done are accurate, and if not, how they should be changed. In addition, it provides the participants with an opportunity to correct our mistakes, to volunteer additional information, and to make clear their intentions for acting in a certain way. That is why for Lincoln and Guba (1985) the member check is "the most crucial technique for establishing credibility" (p. 314).

- Perspectives developed in other, comparable situations—these can lead to the discovery of shortcomings in our own research process. Other practitioners' accounts, research papers and books and the action researcher's own experiences are all sources of alternative understandings of the situation being investigated.
- Perspectives drawn from other research methods—any of the types of triangulation described above is obviously a way to get another perspective.

One of the results of seeking alternative perspectives is that we may find discrepancies or dissonances among the accounts and explanations. Discrepancies can have three main causes:

- They can result from the way research methods were used. For example, our own observations of a situation can be different from an external observer's observations. This calls for three possible courses of action. First, we can identify and correct mistakes in our own observations, or, if there is no way of knowing which data are more reliable, we can provide alternative interpretations that express the ambiguity. Second, we can learn from this experience and adapt, or add to, our research methods. Third, we can try to reconcile the two accounts

through analysis of both and synthesize a new interpretation based on the combined observations.

- If discrepancies or dissonances cannot be explained by re-examining the research process, they may be caused by different perspectives inherent in the situation being researched (see Chapter 4). In this case, the practical theory emerging from the research will need to be extended to explain why the situation is seen differently from different perspectives. This is illustrated by the following example.

A teacher begins a lesson by asking questions. In an interview she explains her intention: the questions are meant to stimulate the pupils to think about the subject matter and discover links between different ideas. However, she is not satisfied with the results. To her the pupils' answers show very little "thinking" and no "links between ideas." During a group interview with the pupils it emerges that they interpret the teacher's questioning as a test. In this situation, they want to give an answer that is "correct," and that "reflects the views they believe the teacher holds." They do not want to take any risks. In this case, the reason for the discrepancy between the teacher's and the pupils' views cannot be explained in terms of the research methodology. The discrepancy "is inherent in the situation." It will be important to explain the existence of the divergent explanations in the practical theory of the situation, for example, by saying:

- The teacher interprets the situation in terms of her immediate motives for action.
- The pupils do not perceive the teacher's motives in this situation, but interpret her action in terms of their own experiences of similar situations in the past (their socialization as pupils).
- The result is the observed dissonance.
- This finding does not suggest any different interpretation of the teacher's motives. However, if she takes seriously the pupils' understanding of the situation from their socialization in the classroom, she will have to take into account ways in which, over time, she can improve the effectiveness of her questioning.
- Discrepancies may also be caused by different ideologies or beliefs that shape the "windows" through which we gather data. It is possible for two people to observe exactly the same set of events and yet attribute different meanings to them because of their prior experiences, knowledge, and beliefs. For example, one social worker could react to a client's erratic appointment keeping by attributing it to irresponsibility on the part of the client. Another could attribute it to the client's possible lack of resources that makes it difficult to keep appointments without the possibility of losing his or her job or leaving his or her children without care.

2 Testing through practical action

Have the understandings gained from research been tested through practical action?

How can we know whether our new knowledge or understanding is valid? That is, how can we tell if it accurately describes, explains, or theorizes? One way to answer these questions is to test our knowledge and understanding through practical action. This is similar to what has been called catalytic validity (Bailey, 2016; Lather, 1991). Catalytic validity refers to how successful the research process is in serving as a catalyst for personal or social transformation, or as Lather puts it, catalytic validity “represents the degree to which the research process re-orient, focuses and energizes participants toward knowing reality in order to transform it” (1991, p. 68). If action research has a social justice orientation, then when we take action to test our understanding that we gained from our research, we are seeking catalytic validity.

3 Ethical justification

Are the research methods compatible with both aims of our practice field and democratic human values?

There is the stereotype of the dispassionate scientist, locked away in his laboratory, pursuing science so pure that he need not be concerned about its effects on humanity. While there may be some scientists who still believe that they are in this exalted position, there are few who are unaware that their discoveries will have some effect on society. This can be seen in the review criteria of the National Science Foundation. As one might expect, they ask reviewers to examine the intellectual merit of the proposed activity: that is, “How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields?” But they also ask reviewers to examine the broader impacts of the proposed activity, including how well it promotes teaching and learning and broadens the participation of under-represented groups, and the benefits of the proposed activity to society (National Science Foundation, 2004). However, what many scientists do not consider are the effects of society, such as their own beliefs, politics, religion, and gender, on their research. This is contrary to the findings of those who study the working of scientists who have found that there is a dynamic interplay between the culture in which the science is being done and the research questions asked, the methods used, and the conclusions drawn. What all this suggests is that even those researchers in the most traditional sciences need to pay attention to ethical and political considerations of their work. While these considerations have not become part of the accepted criteria for the validity of traditional research, we believe that they should be for all research, and especially research that is concerned with humans and other living beings.

Action research as we define it is research involving those people whose problem it is and who want to do something about it to improve the way they work with other human beings. Action research, therefore, always interferes with social situations—it always has an effect on other human beings. In addition, other human beings always have an effect on the action researcher, the methods used, and interpretations of results. Therefore, when we carry out action research it is very important that our activities abide by ethical quality criteria. We examine some of those criteria below. However, as the practice professions like teaching, nursing, and social work have become increasingly regulated, ethical codes of practice have been developed by professional associations and state and national regulatory agencies. In addition, many institutions have their own rules for if and how research can be done in their setting. Those institutions that routinely do research with human subjects (for example, universities and teaching hospitals) have Institutional Review Boards (IRBs) that review all proposed research using ethical standards. Therefore, it is important for action researchers to be aware of the rules and regulations that govern the research process in their practice situations.

Given this, we have two main ethical quality criteria for action research:

- 1 The research should be compatible with the aims of the situation being researched, rather than working against them. For example, data collection based on competitive tests would be incompatible with the educational aim of fostering cooperation between pupils. Similarly, methods that kept patients unaware of all their medical options would be contrary to the aim of increasing patients' rights.
- 2 Action research is based on the belief that effective change in practice is only possible in cooperation with all the participants in the situation—it cannot be achieved against their will. Therefore, research methods should help to develop democratic and cooperative relationships. Argyris (1972) shows convincingly that many research designs do not contribute to democratic and cooperative responsibility. Action research tries to overcome this problem (a) by being governed by ethical principles; (b) by negotiating an ethical code; and (c) by allowing all aspects of the research to be open to negotiations among the participants and the researcher.
 - a The research methods are governed by *ethical principles*, in particular:
Negotiation Research techniques may only be used with the consent of all those concerned. What does this mean in practice? In classroom research the pupils are told the aims of the investigation and are asked for their cooperation. If the effects are likely to go beyond the classroom, fellow teachers, administrators, and community members are similarly approached. This process of

informing and asking for cooperation is repeated at every stage. If the methods of data collection are not acceptable, alternative procedures have to be negotiated. Before an interview, the participants are told what use will be made of the data, and afterwards they are given the opportunity to think over what they have said and asked if the data can be used in the research. If they refuse permission this has to be accepted (for example, by deleting the file of the interview). In our experience it is very rare for participants to refuse to cooperate if they believe a project is important for them and they have been asked for their cooperation explicitly. They usually want their views to be considered. It is worth noting that the rather vague category of "all those concerned" is likely to include both those immediately involved and others whose significance may emerge only after the research begins.

Confidentiality The data are the property of those from whom they originate. Data have to be treated confidentially and may not be passed on to others without permission. Research reports and case studies must not be published without giving participants the opportunity to comment: this may lead to changes being made or to the comments being incorporated in the writing. If individuals can be identified they must be asked for permission before the report is passed on to others. Making data anonymous by leaving out or changing the names is often not good enough. Most action research is local research and it is easy to identify the location and participants.

Participants' control Those who participate in the situation keep control of the research. This ethical principle is of great importance in building trust between an action researcher and external facilitator, or between teacher and pupils. Lawrence Stenhouse (1975) argued convincingly that control over research and any changes resulting from it should be in the hands of those who have to live with its consequences. This principle is of special importance to outsiders who facilitate action research. They must make sure that they support but not dominate the action researcher.

- b The ethical principles are set out in an ethical code (Williamson & Prosser, 2002). When action researchers collaborate with external facilitators, it is important to draw up an ethical code defining the rights and duties of all parties. This should be discussed with participants beforehand and revised if necessary. Some external facilitators sign a contract with the action researchers setting out their aims and principles for democratic collaboration. An ethical code of this kind will always need to be negotiated among all those concerned, so that it is tailored to the particular context. Again, it is important to determine what rules and regulations govern the doing of research in your situation.

- c The conduct of the research remains open to negotiation. Even if those concerned have been fully informed from the start, and principles for collaboration have been written down, misunderstandings and conflicts can emerge in the course of the research. Therefore, negotiation continues to be important *throughout the entire research process* and, in the event of conflict, existing agreements must be open to further negotiation (see D. Johnson, 1984).

4 Practicality

Are the research design and data collection methods compatible with the demands of practice?

Practitioners are very busy people (Feldman & Atkin, 1995). It is possible that action research activities can get put on the back burner or are left in the “next things to do pile.” If action research is to be of high quality, it needs to be compatible with the work and life of the action researcher. By compatible, we mean that the research design and individual research methods should be:

- Compatible with the temporal and spatial flow imposed by the practitioner’s main responsibility. What we mean by this is that unlike traditional researchers who can collect data and then spend months or even years analyzing it, action researchers need to have results from their research almost immediately. While it will help a social worker in future years to know how best to work with a client, the need is immediate if he or she is going to improve the ongoing situation both for the client and for him or her. To help accomplish this, action researchers should develop as many ways to embed the research process within their regular practice as possible. For example, a discharge interview can be both an opportunity for patients to learn what they need to continue to regain their health and a means of collecting data on a research question. A group session can be therapeutic and also provide data on how best to run the sessions. It is also important for action researchers to be aware of their professional and personal lives. An honest assessment of demands could suggest that it may not be the right time to do an in-depth action research study and that it should be put off to a later date.
- Compatible with the professional culture of the practice field. Sometimes people who engage in action research choose a problem to investigate that is interesting to themselves and to others, but is tangential to their practice. This can easily occur if an outside facilitator puts his or her agenda ahead of the teacher’s. In short, the focus of the action research should match the actual concerns of practitioners, and help them to understand their practice situations and to improve their practice.

Data analysis

Our purpose in this chapter is to help you answer the question, “How can I make the best use of my data?” For the most part, this chapter—like the one on data collection—is a kind of toolkit. It contains a variety of analysis methods to make the best use of data. In it we will show you ways in which you can analyze your data so that your understanding of your situation becomes clearer, and more reliable as the basis for planning action.

Making sense of data

Human beings look for meaning. One of the ways that we do this is by ascribing meaning to what initially appears to be a jumble of information. We sort, characterize, group, and separate. We analyze and synthesize; inventing categories that help us to ascribe meaning to chaotic events. This is one of our most important abilities. It helps us to see the world as a network of interrelationships, coherent and predictable. The more we refine this ability the more we feel at home in our environment. A very old example of the human need for meaning is mythology. Here is an Australian aboriginal myth:

Walu, the sun, goes down into the sea every night and becomes Warrukay, the big fish, in order to swim beneath Munadha, the earth, and come back again to the proper place in the morning.

(Isaacs, 1980, p. 144)

For the inhabitants of the coastal region, the sun sinks daily into the sea and emerges again on the other side of the world. It must have come to the other side somehow. It is certainly plausible to suppose that the sun could only do this in the shape of a big fish. This myth resulted from an *analytic process* in which observations were selected, put into relation with each other, and interpreted. The explanation seemed reasonable to the people: it corresponded with their understanding of the world, confirmed and expanded it. It was emotionally balanced and made them feel secure.

In another example, meaning is also ascribed to events:

While a teacher is explaining a point, she is observing the classroom. She watches the behavior of some of the underachieving pupils, among others, Susie, who from previous experience she does not expect to pay much attention. She notices that Susie is listening, who then asks a sensible question. The initial impression is intensified and is accompanied by interpretations and feelings: for example, "Susie is participating," "perhaps she is having a good day," "maybe I've been underestimating Susie." But the teacher is still unsure. "Is she really on task? Or is she only pretending? After all she isn't taking notes." The teacher wants to be sure and asks Susie a question that she should be able to answer if she has really been listening. Susie answers the question and the teacher gives her an approving smile.

One of the purposes of analysis is to find explanations that "fit" our understanding and therefore seem plausible. The teacher in the example above searches for an interpretation of the situation that seems right to her and serves as a secure basis for action. However, plausible explanations cannot necessarily be trusted. Sometimes they are the product of prejudices and wishful thinking and fail to stand up to examination. Another of the purposes of analysis is to check on explanations and test them. As a result, what seems to be plausible at the end of an analytic process often differs from the assumptions that seemed to be valid at the beginning of the process.

The example above illustrates the most important analytic procedures:

- Events are observed.
- The focus of observation is selective. The teacher pays more attention to the low-achieving pupils.
- Events are organized to present a coherent mental picture, that is, a theory of the situation. The teacher relates different observations to each other (for example, Susie listening, Susie asking a sensible question).
- The situation as perceived is interpreted: the teacher draws conclusions: "Susie is participating," "she is having a good day," "maybe I have underestimated her."
- The practitioner's understanding of the situation is examined critically. Not only is a theory constructed, based on the perceived events, but also it is subjected to critical questioning. The critical part of the analysis goes hand in hand with the constructive one. In the example, this takes place through internal questions ("is she only pretending?"), through observations that at first seem to contradict the interpretation ("she isn't taking notes"), and through definite actions (asking a question).

Rather than being clearly separated from each other all these procedures are interconnected and enable us to cope emotionally, intellectually, and practically with our daily routines. This kind of analysis of daily routines allows us to react quickly to an initial understanding and to use it as the basis for action (for example, praising Susie). Its disadvantage is that it all happens very quickly so that we can only process a very limited amount of information and carry out a small number of testing procedures. It is therefore insufficient for understanding any major discrepancies between our expectations and our perceptions of the situation. This requires greater distance from the events and a certain amount of time to concentrate on the analysis.

If we want to seek understanding that goes beyond the immediate and below the surface, it requires that we give ourselves enough time for the analysis and distance from what happened in an event or series of events. For example, what do we mean by an underachieving student? Is Susie underachieving because she is lazy? Or does she have a learning disability? Or maybe there is something about her home situation that is affecting her performance in school? Is Susie a member of a minority group that has historically been and continues to be marginalized by the school system? These are the types of questions that we may want to ask if we engage in practical or emancipatory forms of action research (see Chapters 5 and 10).

Data can be an important prop for your memory when you want to withdraw from the stream of events and give yourself time for careful analysis; with the help of data, memories can be reconstructed more vividly (for example, by listening to the tape recording of a lesson), and be more available to critical questioning, making it possible to correct false interpretations and delve more deeply into the situation.

The analysis of both data and direct experiences should result in a deeper understanding of the situation, and a “new” practical theory that can extend existing understanding. Through analysis, data and experiences are restructured and practical theories elaborated. In this sense, analysis, theorizing, and restructuring are the same. But, can this be called research? Is the teacher, nurse, social worker, or other professional practitioner who does the analysis a *researcher*? A sharp line cannot be drawn between analysis in research and everyday analysis. The more systematically an analysis is carried out (based on theoretical and methodological knowledge), the more critical the process (tested against conflicting data and interpretations), and the more communicative it is (the process and the results made public), the more it deserves to be called *research*.

The results of the process of analysis are preliminary and hypothetical, and require further testing through reflection and examination in practice. Results are the interpretations, practical theories, and conclusions that we draw from our data. We use data analysis methods both to *construct* and *critique* our findings. Part of analysis is the process of breaking a

complex topic into smaller parts in order to gain a better understanding of it. Another important part is synthesis, which is “the act of combining different ideas or things to make a whole that is new and different from the items considered separately” (Cambridge English Dictionary, 2016). We collect and analyze data so that we can get a better handle on a complex system, like teaching and learning in schools. However, as we go about doing action research, we want something new, better, or improved to come out of the process. As part of this we need to engage in synthesis. In an organic and flowing activity like doing action research on professional practice, the breaking down of complex topics into smaller parts and the construction of new concepts occur together as we develop and critique our findings. The remainder of this chapter is divided into two large sections. In the first, we present various constructive ways to engage in analysis and, in the second, ways to critique our new understandings. Again, like with analysis, constructive and critical methods can happen, and ought to happen, throughout the doing of action research.

Constructive methods of analysis

The constructive data analysis process—how we develop and come to our findings—can be represented in a cycle of four steps:

- Reading data—data are “read” (closely scrutinized) in order to recall the events and experiences that they represent: What was done? What was said? What do we think actually happened?
- Selecting data—important factors are separated from unimportant ones, similar factors are grouped, complex details are sorted and (where possible) simplified.
- Presenting data—the selected data are presented in a form that is easy to take in. This can be in the form of a written outline or a diagram.
- Interpreting data and drawing conclusions—relationships are explained and a practical theory (or model) constructed to fit the situation that has been researched. This theory or model should relate to the research focus.

We represent this process as a cycle because the interpretation of data to draw conclusions and construct findings can require several revisits to the data. It may also lead us to collect more data, do additional research activities, or even reformulate our starting points for research.

These activities do not only take place during a separate stage of analysis, but during the entire research process, with the result that decisions made in each phase have consequences for what follows. This is especially clear with respect to data collection: decisions have to be made about which aspects of events are observed (selection), in what form the data are stored (presentation), and so on. Figure 6.1 looks very much like Figure 1.1

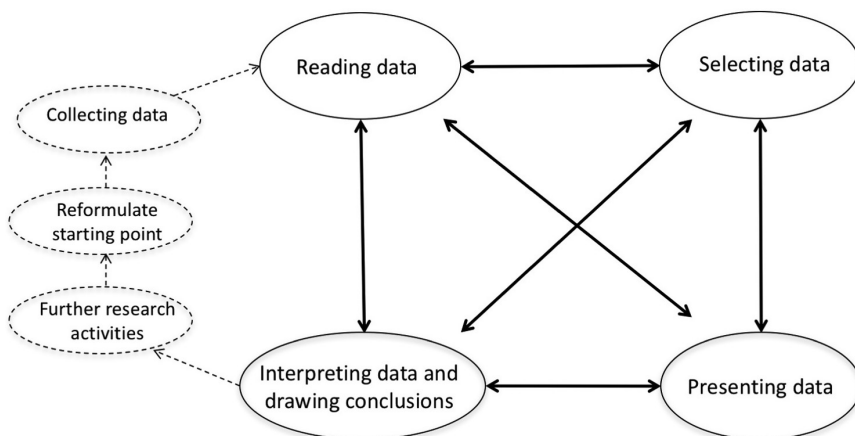


Figure 6.1 The constructive analysis of data (redrawn from Miles, Huberman, & Saldaña, 2014, p. 14).

in which we first represented the action research process. This reminds us that almost every aspect of action research can be seen in itself as a mini-action research cycle.

We do analysis to make sense of our data. This construction of meaning is accompanied by a *critical examination of the analytic process*. Critical does not mean being negative in this sense. Each stage of the analysis is tested. Do the data bring the event to mind? Has the data selection focused on the central issues? Does the data presentation clarify the relationships between events and stimulate further analysis? Does the interpretation explain the data satisfactorily? This critical examination often occurs at the same time as the constructive activities, but sometimes it is useful to create a separate stage in the research process specially for testing.

We want now to present practical methods that an action researcher can use to try to make sense of data. We will begin with elementary methods for the constructive stage of data analysis—a kind of basic toolkit for the action researcher. In doing so, we avoid repetition of the methods of analysis described in Chapters 2, 3, and 4. Later in the chapter, we will provide a set of elementary methods for the critical stage of analysis, followed by two complex methods that combine elements of these basic methods: pattern analysis and dilemma analysis.

M6.1 Making data summaries

It is helpful to review data immediately after they have been collected (audio recordings, observations notes, documents) and write a summary, both to provide easy access to the data later and to get an overview of what they offer concerning the research question

(Miles, Huberman, & Saldaña, 2014). The data summary might contain answers to the following questions:

- What is the context in which the data were collected? Why were they collected? Why in this particular situation? Why use this method of collection?
- What are the most important facts in the data? Is anything surprising?
- About which research issues are the data most informative?
- Do the data give rise to any new questions, points of view, suggestions, or ideas?
- Do the data suggest what should be done next, in terms of further data collection, analysis, or action?

It is a good idea to cross-reference each answer to relevant passages in the data to audio recordings or transcripts. Summaries of existing data are also useful. A data summary should not take more than two pages or it begins to lose its value as a quick point of reference.

Developing categories and coding data

One important method of reading, selecting, and presenting data is by organizing them into *categories* (coding them). Imagine a room in which a large number of toys have been left lying around and it is your job to create order. You will probably begin by walking round and having a look at things. According to your interests and the characteristics of the toys, features will come to mind that help you to order them: for example, color, size, shape, state of repair, the age group for which they are suitable, and so on. Then you will choose two or more features by which to begin to sort them. Something similar happens when a researcher wants to create order from a quantity of data. Categories (features) need to be chosen that are relevant to the research question and at the same time partially express the contents of the data. Using these categories the data are sorted: for example, by ascribing a suitable category to each passage of a text. This process is called coding.

There are two well-recognized methods of coding data. According to the *deductive* method, categories are chosen from the researcher's theoretical knowledge and the data are then searched for relevant passages: in this case, the development of categories is independent of the data. According to the *inductive* method, categories are chosen during and after scrutinizing the data: in this case, the categories are "derived" from the data (see M4.12). One of the more well-known types of inductive coding strategies is called "grounded theory" (Corbin & Strauss, 2015). However, other researchers have developed similar methods and describe them in detail

in their publications (for example, Coffey & Atkinson, 1996; Creswell & Miller, 2000; Patton, 2015; Saldaña, 2015).

In action research, it is probably most useful to use a mixture of both methods, capitalizing on what you already know but remaining open to the surprises the data can contain. As the inductive method is less common we will describe one possible approach to carrying it out in M6.2.

M6.2 Inductive data coding

Develop the categories by grouping concepts that belong together. This is a two-step process. First, you give conceptual labels to parts of the text. Then, the concepts are grouped together into categories. This gives some structure to the whole by suggesting connections among individual categories (see M4.12). This process is called “coding.” At this time there are a number of different software applications to aid in coding textual, audio, and even video data. Although they differ depending upon the operating system (for example, Microsoft or Apple), the type of device (computer or tablet), whether downloaded to the device or web-based, the actual coding process is very similar. Rather than describe how to do this with a particular app, we describe how the process can be done manually. We believe that this will give you a good basis for the use of whichever app you choose.

Coding of data using the inductive method

- 1 Read through the text you want to code (for example, the transcript of an interview). Underline or highlight each passage that seems to you important (interesting, surprising, unexpected) in relation to your research question. This will give you a broad overview of the contents of the data through the marked passages.
- 2 Go through the text a second time looking only at the marked passages, and decide upon a conceptual label (one word or a short phrase) for passages that express its contents. The conceptual label is the code (see Figure 6.2).
- 3 Now look for ways to group codes into broader categories and make a list of them. For example, the code “Teacher amazement” identifies a chunk of text in which the teacher noted her feeling about what was happening in the classroom. Therefore, she may set up a broader category of all of her feelings.
- 4 To keep track of where in her data those feelings are expressed, she needs to note the source of text—her research notebook, the date of the entry—October 14, 2016, and the line number—L2.

Code	Line #	Research notebook entries
	1	October 14, 2016
Teacher amazement (L2)	2	I <u>thought it was striking</u> that the pupils only
Pupil impatience (L2-3)	3	<u>read through the beginning of the instructions</u>
Pupil lack of foresight (L4)	4	and then <u>started working immediately</u> without
	5	knowing what was going to follow and <u>without</u>
Pupil lack of planning (L5-6)	6	<u>making any timetable</u> for their work. Also, there
Pupil lack of organizing (L7)	7	was <u>no division of labor</u> .

Figure 6.2 Example of inductive coding.

Similarly, she could group “Pupil lack of foresight” and “Pupil lack of planning” into one broader category, for example, “Pupil readiness for independent work,” and note the source, date, and lines for each of those codes.

All of what we described above, except for the coding and the development of the broader categories, is automated through the use of qualitative software apps. Once this is done, the software can help you to make different types of reports of your coding and categorizations, and to organize the results into tables, charts, and graphs. Most of these apps also provide ways to test hypotheses that you develop from the practical theories that emerge from your coding.

A few practical tips for coding

In the process of coding, you begin to hold a reflective conversation with the text. You check whether the categories correspond with what is in the text and relate to your research question, and change them if necessary. When you have gone through the text a second time you will have a list containing all the categories you have ascribed to the marked passages on the text, with one or more codes assigned to each category. The software will typically make it easy to find the relevant passage quickly, and will label the text with the categories and/or codes in the marked passages.

It is a good idea to write *definitions of the categories* to which you can refer. A definition expresses your theoretical understanding of the category and gives it a meaning independent of the data. Definitions are useful

particularly if you continue to elaborate and refine them in the course of your work, in relation to both new data and your own developing understanding. It also helps to provide exemplars of the categories. Exemplars are examples from your data that illustrate the definitions.

Here are a few other tips:

- Data should be coded as soon as possible, while your direct experience of the event is still fresh. Coding can also be helpful in suggesting ideas of what to do next in your research.
- Categories are key concepts that form the nuclei of ideas. Time spent working on them is well invested. To develop and test your first categories we recommend that you write a short piece to try out how easily you can use them. You can use the freewriting method described in M4.5. Some categories give rise to a number of ideas and suggest possibilities for action, whereas others remain sterile.
- It is an advantage in action research (in contrast to traditional empirical research) if the action researcher does the coding, so as to make use of relevant background information not accessible to non-participants in the situation. This implicit knowledge of everyday, self-evident things can, however, lead to “blind spots.” Therefore, we recommend that you talk about the categories, and how best to structure them, with your research group or critical friend who can help you to become aware of any blinkered assumptions that stand in the way of your understanding.

M6.3 Categories for questionnaire or survey data

Surveys and questionnaires can produce *qualitative* and *quantitative* data. M6.5 will focus on the analysis of quantitative data. Here we want to show how qualitative textual data that come from surveys or questionnaires can be grouped and categorized to reduce them to make them more manageable. We will illustrate this through an example.

Jeff Kenney, a middle school science teacher, had early on in his career recognized that it was important to “connect” with each of his pupils. By connect, he meant that he wanted to have a relationship with each pupil in which they—Jeff and the pupil—saw each other as a distinct human being. Jeff felt that he was usually good at doing this with his pupils, but as a result of the reconnaissance that he did to develop a starting point for research, he realized that there were pupils who for some reason did not respond to his attempts to make this connection. Rather than single out these pupils as subjects of his research, he chose to survey all of his pupils to find out what in their

teachers were important to them. He asked them to complete the following sentences:

- 1 *The thing that I like most about my favorite teacher is ...*
- 2 *I feel really good when a teacher ...*
- 3 *I hope that next year's teachers will ...*
- 4 *I really like teachers who ...*
- 5 *I have trouble getting along with teachers who ...*
- 6 *It makes me angry when a teacher ...*

In reading through the surveys, he grouped the pupils' responses into a large number of concepts. Here, for example, are the concepts that he developed for the question, "The thing that I like most about my favorite teacher is ..."

- A He/she has a sense of humor. (25)
- B He/she is nice. (21)
- C He/she helps me. (13)
- D He/she makes work fun. (9)
- E He/she understands me. (7)
- F I can talk to him/her easily. (4)
- G He/she encourages me. (4)
- H He/she gives us freedom. (4)
- M He/she doesn't yell. (1)
- N He/she is easy to understand. (1)
- O He/she lets us do experiments. (1)
- P He/she relates to us. (1)
- Q He/she is laid back. (1)
- R He/she is happy. (1)
- S He/she smiles. (1)
- T He/she won't let me fail. (1)
- U He/she listens to me. (1)

As a result of this initial coding, Jeff found that many of his students responded that they wanted their teachers to be "nice" and not "mean." Jeff gave the students a second, quick survey that asked them to explain what they meant by "nice" and "mean." When that information was combined with his original results, he had nearly 500 responses to his questions, with typically more than 20 different conceptual labels for each question. To make sense of his data he then grouped the concepts into categories. Figure 6.3 shows the result of the grouping that he did with his critical friend.

He used the method described in M6.2 to develop categories. For the most part the categories described positive or negative behaviors of teachers. For example, one of the categories that he developed was "Positive teacher disposition." This included student responses

Prompt	Category of student comment	Number of responses	Percentage
1. The thing that I like most about my favorite teacher is ...	Positive teacher affect.	43	45.7
	Teacher's relationship to student is positive.	30	31.9
	Teacher's actions that make classroom environment positive.	13	13.8
	Quality of teaching methods.	8	8.5
	Total responses	94	100
2. I feel real good when a teacher ...	Teacher's actions that relate to student's feelings.	45	60
	Teacher's actions that help students.	20	26.7
	Teacher's actions that make classroom environment positive.	10	13.3
	Quality of teaching methods.	0	0
	Total responses	75	100
3. I hope that next year's teachers will ...	Positive teacher affect.	45	54.9
	Teacher's relationship to student is positive.	18	22
	Teacher's actions that make classroom environment positive.	16	19.5
	Quality of teaching methods.	3	3.7
	Total responses	82	100
4. I really like teachers who ...	Positive teacher affect.	36	43.4
	Teacher's relationship to student is positive.	27	32.5
	Teacher's actions that make classroom environment positive.	19	22.9
	Quality of teaching methods.	1	1.2
	Total responses	83	100
5. I have trouble getting along with teachers who ...	Negative teacher affect.	32	49.2
	Teacher's actions that make classroom environment negative.	19	29.2
	Quality of teaching methods.	14	21.5
	Total responses	65	100
6. It makes me angry when a teacher ...	Teachers actions are negative toward student.	41	74.5
	Teacher's actions that make classroom environment negative.	10	18.2
	Quality of teaching methods.	4	7.3
	Total responses	55	100

Figure 6.3 Categorizing qualitative survey data.

to Prompt 1, such as "He/she has a sense of humor," "He/she is laid back," "He/she is happy," and "He/she smiles."

Another category that he used to sort responses to Prompt 6 was "Teacher's actions are negative toward student." Examples of conceptual labels to Prompt 6 that he included in this category were "Doesn't listen to me," "Pays no attention to me," "Doesn't sympathize with me," and "Embarrasses me in class."

Categorizing survey or questionnaire data in this way can be a powerful means of data analysis. This can be seen in Jeff Kenney's analysis in which the students put much more emphasis on the teacher actions and characteristics that concern the relationship between the students and teacher than on the quality of teaching methods. While this may have been evident in the original list of data, the coding, categorizing, and representing of the data in a table make the difference much starker. Before we take significant action based on this finding, it would make sense to look critically at Jeff's analysis. For example, there may be the possibility that the difference is due to the way that the prompt was worded, rather than any fundamental aspect of the educational situation. Also, there is the possibility that the large number of responses in any one category (for example, "Positive teacher disposition") could be due to it being very broad.

M6.4 Writing theoretical notes

It is likely that at any stage in the research process, such as when formulating a starting point or analyzing data, ideas and theories are likely to come to mind relating to the research question: what certain data mean, how observations could be explained, how an important concept could be defined, and so on. These ideas may turn out to be important as you progress with your action research so you should make a record of them. One way to do so is by writing a *theoretical note* (TN).

TNs help us to move beyond the detail of events to a conceptual level, to develop theories, uncover relationships, and find significance. Writing them takes only a few minutes and is a quick way of capturing emergent ideas during the research process. Writing TNs usually gives some immediate satisfaction, as they offer access to your own ideas that may have been hidden, or partly hidden, up to this point.

TNs should always be dated and labeled with a suitable catchword so that they can easily be found again. It's a good idea to make a brief note of the data or event that gave rise to the ideas. This short section is intended only as a reminder. Further information on this quick and economical first form of analysis has already been given in Chapter 2 in 'An Example Taken from a Research Journal.'

M6.5 Quantification

To quantify something is to measure it (Oxford Dictionaries, 2016c). In classical social science research, the measurements are typically used in ways that aggregate the features of many events or cases and, as a result, it often represents too little of the holistic structure of practice. In action research, we recognize that some elements of quantification are of great importance in people's thinking about practice. For example, when we say that something is "significant" or "common" we often have come to this judgment by counting, comparing, and weighing up. Intuitive counting is often a precondition for developing categories. It is important to become aware of the close connection between our judgments and quantitative aspects of our experience, and to quantify consciously whenever it is useful and gives a good return for effort.

Quantification can be useful in the following situations:

- 1 *To provide information that helps you to describe your situation*
Numerical data can be used descriptively in many different

ways. One of the simplest is to keep track of attendance of some sort. It could be class attendance or attendance in therapy sessions. Another use is to keep track of how you use your time. Allan decided to do that to find out what was happening to his time after he told one of his doctoral students that he had only 25 minutes to speak with her about her dissertation proposal. In reflecting on that comment, he realized that this was dissonant with his desire to be a good mentor to his students. He wondered what it was that was wrong with his practice that caused him to have little time for his students. He decided to note down how he spent his waking time for one week. The results are recorded in Figure 6.4.

- 2 *To carry out a preliminary survey and get some data quickly* For this purpose you can make use of the fact that numbers are much easier to handle than words. For example, Shelly Bathe was a case manager for university students with psychological and/or medical disabilities. As a way to better understand her practice she developed a ten-item questionnaire to try to understand her clients' beliefs about successful case management. Five of the items used a Likert-type scale (Likert, 1967). This scale gives the respondent a range of five choices from strongly disagree to strongly agree. These choices can then be associated with numbers, for example, from 1 to 5. If a respondent chose Agree for item 7 (she agreed that a comfortable rapport between student

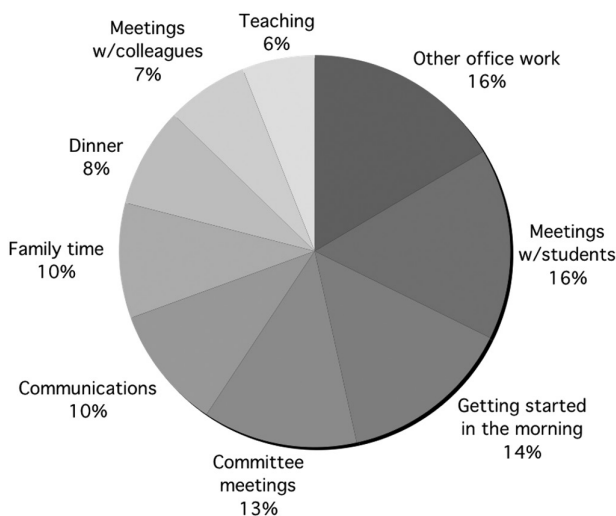


Figure 6.4 Percentage of Allan's waking time spent in different activities.

and case manager contributes to successful case management), then that would be recorded as a 4. If she had chosen Neutral, it would have been recorded as a 3, and so on. Shelly could have put the values for all the respondents onto a spreadsheet and found the average response, the spread of responses, and so on. She also could have used the spreadsheet to make a table or graph of the responses (Bathe, 2000). Some action researchers find it useful to leave out the Neutral or middle choice so that respondents need to make a choice between agreeing or disagreeing. Also, there are many different types of options for Likert-type surveys (for example, Vagias, 2006).

- 3 *To reveal prejudices* This function of quantification is important because of the key part played by intuition in action research. There are moments when you feel a sense of revelation and everything seems to fall into place. The only problem is that you can be wrong. Observations that do not fit your own expectations may have been ignored. In situations like this, quantification can be helpful to check the reliability of intuition.

Grayson DeWitt (2000) had just started teaching in a new school. In his previous school, he had been concerned that there was inequitable participation in his classes. He wrote, "As I got more familiar with my surroundings, and had some time to reflect on my performance, I again felt that girls were not participating in class to the same extent as the boys." To check whether his "gut feeling" was accurate, he audio recorded several lessons and counted the number of times that boys and girls participated. He also kept a tally during other lessons, making simple marks on a piece of paper every time a student participated (see Chapter 5 on observation). Grayson found little difference in his classes. Although this confirmed that he was meeting his goal to have equitable participation along gender lines, it opened up several other questions: "Even with this confirmation I was still unsatisfied. How were students participating? What was the quality of student responses?" (p. 9). He then went on to gather data to examine these questions in his second cycle of action research.

- 4 *To explore the generalizability of findings* Sometimes results relating to only a few people (or a single case) have more general validity and this can be confirmed by quantitative methods. An example of this is the amount of time between when teachers ask their classes a question and when they expect students to answer. In the early 1970s, Mary Budd Rowe, while studying elementary school lessons, found that elementary science teachers allow an average of one second for a response to a question, and follow a pupil response by a comment within an average

of nine-tenths of a second. She also found that extending this “wait-time” to three to five seconds had profound effects on the pupils. For example, the pupils increased the complexity of their responses, more pupils volunteered to answer questions, and pupil confidence increased (Rowe, 1974). While this effect was observable in one teacher’s classroom, Rowe’s quantitative studies showed that increasing wait-time could have significant effects in all classrooms.

Metaphors in research

The movie *Il Postino* (Radford, 1994) is a fictionalized account of Pablo Neruda’s exile to a small island off the coast of Italy. Mario, the only island inhabitant who is literate, becomes the postman. As he interacts with Neruda he becomes worldlier in many ways. One interaction centers on the meaning of metaphor. In this scene, Mario has delivered the mail and then waits for an opportunity to talk with Neruda about the meaning of his poetry. Their conversation becomes an exchange of lines from Neruda’s poetry. It soon becomes clear that Mario does not know what a metaphor is. To help him to understand, Neruda asks him if he knows what it means if he were to say that the sky is weeping. When Mario replies that it means that it is raining, Neruda tells him that is a metaphor. As Mario learned, a metaphor is a figure of speech in which a word or term is used in place of another to denote an analogy.

Metaphors go back to the roots of language. Originally there were only words for things that could be perceived with our senses and these had to be used to convey abstract ideas as well. For a name to be transferred from one thing to another there must be something in common that allows a comparison: tears fall from one’s eyes and rain falls from the sky. What make metaphors interesting are the ramifications of their meaning, including their emotive connotations, all of which are transferred to the new object. We can see this by comparing Neruda’s metaphor with this one: “A tap in the sky is open.” “Weeping” has many associations that are not present in the open tap. If the sky is weeping, does that mean the sky is happy/sad? Who is weeping and why? A metaphor, therefore, provides the opportunity to see something freshly, offering a new perspective on the concept, object, or event to which it is applied.

Metaphors generate meaning

In the example above, we could see how metaphors are able to transfer meaning between objects, events, or feelings. Metaphors can also generate meaning.

There are countless examples in education, such as those that preservice teachers come up with when asked to find a metaphor for “teacher,” for example, a teacher is like an orchestra conductor, an actor, or a coach. In these metaphors, the preservice teachers transfer the aspects of the other profession onto the role of the teacher. The conductor strives to make sure that each musician knows his or her piece and that all the musicians together sound harmonious. The teacher wants each student to learn and excel, and wants the class to work together to create positive opportunities for learning. But there is more to these metaphors than one may see at first glance. The conductor is in front of the orchestra on a stand directing it. Implicit in this metaphor is a separation between pupils and teacher that is both physical and hierarchical. The separation is even greater in the metaphor of teacher as actor. While the conductor is expected to have direct effects on the performance of the musicians, the actor is on a stage in front of a darkened hall and generally looking for reactions and appreciation from the audience. The coach metaphor suggests a stronger relationship between student and teacher, with both physically on the same level, and, given the media image of coaches, some type of “tough love” interaction. Metaphors act similarly in other practices. In medicine, patients are treated differently if their care providers think of them as human beings rather than as illnesses.

Our point in these examples is that metaphors help us to understand new situations and roles, but they also have a generative character that affects the way we see the world. In recent years, the metaphor of the marketplace has become a powerful ideological tool to shape social policy. Politicians in some countries argue that parents and children should see themselves as customers of schools and shop around for the best one. Market forces would then cause schools to compete for “customers” and those that are not successful would close, just like a business that does not have enough customers. This metaphor is also being used to reshape the medical and mental health professions.

Sharon Lowenstein, a divorce mediator, has paid careful attention to the ways that metaphors can shape the negotiations between adversaries. She describes the way that she does this in the following metaphorical manner:

Rather than relying on the metaphor of *war*, which dominates the language of our political and legal systems and thus that of conflict in general, in mediations metaphors should *bridge* differences, *cut to the chase* and put everyone *on the same page* so that negotiations can proceed in a *constructive* manner ... Mediation puts clients in the *driver's seat*; litigation is a *gamble*, a *roll of the dice* that takes control from them. I frequently suggest that clients take *one bite of the elephant* at a time in order to avoid *indigestion*. And, of course, regardless of

the amount of fault each assigns to the other, nearly everyone will respond knowingly to the statement that it *takes two to tango*.

(Lowenstein, 2006, p. 1, emphasis in original)

Lowenstein's advice to mediators shows how language conveys more than the meaning of specific words. It also conveys attitudes, mindsets, and perspectives. The way in which we use metaphors shapes the way we think about the world and influences the decisions that we make about what we choose to do.

Metaphors from diverse communities can also be used to help us think about our practice in new ways. For example, Anneliese Singh, a professor of counseling, uses the metaphor of a patchwork quilt to help her students understand their roles in relation to advocacy for social justice (Singh, 2010). She begins by providing them with some history about how these types of quilts were used by slaves in the US both as a way to provide a record of their cultural values and symbols and as maps of pathways to freedom. She also provides them with a statement:

The quilt is used symbolically for the feelings about race and ethnicity that cover us while we sleep, comfort us against the cold, and are folded and neatly put away during various seasons of the year ... We think of them as so necessary to survival that we give them to babies, and often pack them when going on lone and desolate journeys. Some are tattered and torn from overuse, others are carted out for display, company, or special occasions.

(p. 551)

Singh and her students share stories of quilts in their lives:

to explore how social justice advocacy is both a strategy to "level the playing field" with regard to privilege and oppression experiences and the difficulty of identifying privilege because of its insidiousness, its invisibility, and its protected status through systems of privilege and oppression.

(p. 551)

One of her students who was a school counselor wrote the following as a result of examining her practice and life through the metaphor of a patchwork quilt:

I used to think, Why is there a Black History month? There isn't a White History month. Now I see that every day, every month is White History something. I would have also described myself as open-minded and accepting of others, but now that my perspective

has changed, I realize that I was accepting of others as to what I was comfortable accepting or I was open-minded about what topics I was comfortable being open-minded about. No, I make sure to speak up in school meetings about White privilege. I talk to my family and friends about what I have learned. It's hard for them to understand, but I can't keep silent anymore.

(p. 552)

In a participatory action research project in Botswana, Amy Nitza (2013) described how she and her colleagues combined the tradition of neighbors cooperating to work together with gardening as a metaphor for change (DeLucia-Waack, 2008). In this metaphor, the group's participants identify what flowers they would want to plant with the behaviors, skills, or ideas they want to develop; the weeds that they would pull with what they want to get rid of; and the stones in the garden with things that get in the way. Nitza modified this to better match the experiences and culture of the girls she worked with in Botswana. She changed individuals planting their own garden to the shared land that was farmed collectively in the community. Rather than plant flowers, the girls spoke of the crops and vegetables that they grew. Similarly, removing stones was replaced with clearing brush. These modifications better fit the culture of shared decision making and the experience of farming in Botswana.

As another example of this generative character of metaphors (Schön, 1980), we will contrast two different metaphors for teaching and learning: teaching and learning as banking of knowledge, and teaching and learning as construction of meaning.

Teaching and learning as the "banking" of knowledge

The first metaphor comes from the Brazilian educator, Paolo Freire. He developed it as a way to critique typical ways of teaching and learning in schools, and to show how it failed in his community literacy practice. He first described the banking model of education metaphor in his book, *Pedagogy of the Oppressed* (1989, p. 58). Freire wrote that, in this model, education:

... becomes an act of depositing, in which the students are the depositories and the teacher is the depositor. Instead of communicating, the teacher issues communiqués and makes deposits which the students patiently receive, memorize, and repeat.

This metaphor transfers the idea that teaching and learning is similar to banking: knowledge is "deposited" into pupils' brains and pupils can

withdraw that knowledge for tests or other assessments. This metaphor is extended further in many classrooms in which teachers use a “point system” for grading. When pupils complete an assignment, teachers “pay them” with “points.” Depending on how many points a pupil has amassed, he or she can “buy” a higher or lower grade (Feldman, Kropf, & Alibrandi, 1998).

Freire provides examples of how this metaphor generates teachers’ and pupils’ behaviors and norms. They include:

- 1 The teacher teaches and the students are taught.
- 2 The teacher knows everything and the students know nothing.
- 3 The teacher thinks and the students are thought about.
- 4 The teacher disciplines and the students are disciplined.
- 5 The teacher chooses and enforces his choice, and the students comply.
- 6 The teacher chooses the program content, and the students (who were not consulted) adapt to it. (Freire, 1989, p. 59)

There are similar metaphors that are used to describe and understand this notion of teaching as the depositing of knowledge into students, and students demonstrating what they learned by giving the knowledge back to the educator. In the US, it is not at all unusual to hear the metaphor of feeding knowledge to students and their regurgitating it back to the teachers. One teacher, who was an avid fisherman, described this as the “put-and-take” model of education: streams and lakes are stocked with fish and fishermen take them out (Oxford Dictionaries, 2016b).

Teaching and learning as the “construction” of meaning

This metaphor carries the idea that learners themselves frame their process of learning and “construct” new knowledge, using the experience and knowledge they already have. This metaphor is similar to photosynthesis where the plant builds organic matter from inorganic matter with the help of light and chlorophyll. Pupils are seen as active constructors of knowledge who “understand” facts by reconstructing them using their own resources. This attitude generates different norms of behavior:

- Teachers should “start from where the pupil is at” because the pupil’s existing knowledge provides the materials for constructing further knowledge.
- Teachers should encourage pupils’ independence so they can exploit their maximum potential for learning.
- Teachers should build on pupils’ interests because they will provide the energy and motivation necessary for learning.
- Teachers should offer a variety of activities to cater for the differences in pupils’ prior experience.

- Mistakes, rather than harming the learning process, will provide an opportunity to reflect on learning strategies and improve them. Teachers should encourage the pupils to monitor their own progress, and support them in doing so.

The metaphors of teaching and learning as “banking” and as “construction” call for totally different, even contradictory, courses of action. For a pupil to turn to a classmate and ask a question may be seen as an unwelcome disturbance in terms of the first metaphor, but as a useful part of the learning process in terms of the second.

There are other metaphors that are used to describe teaching and learning that influence what teachers do and policy makers prescribe. Some have a long history, like the idea of the school as factory (Tyack & Cuban, 1995), while others have come into vogue more recently, like the idea that schools are businesses, and pupils and parents are customers (Ravitch, 2016). The former resulted in policies that promoted uniformity among schools and programs, and the creation of large, centralized secondary schools to take advantage of the “economies of scale.” The latter has led to the use of the language of production to describe what ought to happen in schools, and the greater use of standardized tests so that the “marketplace” can determine which schools should get resources and which should not.

Metaphors and the action research process

Identifying, constructing, and analyzing metaphors can help action researchers in several ways. The process widens horizons and enables a better understanding of the practitioner’s situation. Metaphors provide alternative approaches to reality, like mirrors reflecting different facets of the same complex event. The more facets there are, the deeper the understanding of a situation can be, as each facet reflects different aspects of reality. For example, the metaphor “learning as banking” emphasizes the curriculum as presented to the pupil and disregards the processing of the curriculum by the pupil. The metaphor “learning as construction” emphasizes the dynamics of the pupils’ activities and disregards the cultural and social conditions of learning.

Metaphors are good at communicating complex matters as they carry a lot of information in a few words. They are—despite consisting of words themselves—the pictures (images) of language. The metaphor of “banking” evokes a number of associations that can remain unspoken as the reader already knows them from familiar areas of experience. On the other hand, misunderstandings can result from metaphors, as a language full of images is not very precise. Differences in people’s experience can conjure up different associations. This is especially true of the feelings evoked by metaphors.

Metaphors open up new action strategies. Strategies of action often seem normal and obvious only from the point of view of the generative metaphor upon which they are based. As soon as the metaphor changes, new strategies of action become relevant. Schön illustrated this with the example of a research team that was trying to develop paintbrushes using synthetic fibers (Schön, 1980). The team was having little success in getting the synthetic brushes to apply the paint as smoothly as natural bristles until one of the researchers began to think of the brush as a pump to move paint from its container to the canvas or wall. This new metaphor generated new ways for the team to think about what they were trying to accomplish, which led them to come up with different designs for the brushes.

Schön also made clear that while research and problem solving can be facilitated by the construction of new metaphors, there are pre-existing, tacit metaphors that shape the way we think about our practice situations and shape our behaviors. Therefore, it is important for us to become aware of the metaphors that we live and work by, so that we are not manipulated by the images they create in our minds. Understanding the generative character of metaphors can also help action researchers to distance themselves from the apparent obviousness of daily routines. If you know that you see reality only through the “glasses” of metaphors (a metaphor again!) it is easier to change them—and new strategies of action become possible (see Chapter 4).

M6.6 Researching with metaphors

Metaphors are of a generative character. They cannot replace the analysis of data, but they can stimulate new directions for analysis and in this way enrich the research and development process. Although some suggest that metaphors are only valuable if they come to mind naturally, and that it is no good searching for them consciously (Reiners, 1961, p. 335), we suggest several different ways to use and construct metaphors in your research.

Miles and Huberman (1994) provide the following advice:

- Stay aware and become aware of the metaphors that you use in your practice and in your research.
- Avoid trying to find overarching metaphors too early in your research. They can cause you to narrow your focus too early and too much.
- Handle your data playfully. For example, you could ask yourself, “If I only had two words to describe this situation, which ones would they be?”

- Talk about your data with your research group, critical friend, or colleagues. Conversation in a relaxed atmosphere may spawn new and unusual perspectives.
- Know when to stop pushing the metaphor. “When the oasis starts to have camels, camel drivers, a bazaar, and a howling sandstorm, you know you’re forcing things” (p. 252). On the other hand, pay attention to when the metaphor falls apart—that can open up new ways to think about your situation.
- Take up metaphors that are in the data (for example, in interviews) and elaborate playfully upon their possible meanings for the data. For instance, if a school principal refers to his role as leader as “father of a family” ask who are the “distant relatives” and who are the “naughty children.”

There are also specific methods that you can use to construct metaphors. One is called “A walk in the woods.” We’re all familiar with stories about people solving problems or coming up with new ideas when they turn away from their work and do something relaxing, like taking a walk in the woods. You can increase the likelihood of producing an “aha moment” by writing yourself a note about your situation and putting it in your pocket. Most likely you will forget about that note after a while, and then later on, when you put your hand in your pocket and find a folded piece of paper, the surprise of re-encountering the problem can help you to create a metaphor. It would also help to have some other paper and a pen or pencil to jot down the ideas that you get so that you don’t forget them as you hike back home.

We suggest that you do the following:

- 1 Construct a metaphor for your practice. You can do this by following Miles and Huberman’s suggestions (see above) or by taking “a walk in the woods.”
- 2 Push the metaphor. Stop pushing either when the metaphor no longer pertains to your research or when “the oasis has camels, camel drivers, a bazaar, and a howling sandstorm.” How do the details of the metaphor correspond or map onto your practice situation or research?
- 3 Ask yourself, “Why doesn’t the metaphor work anymore?” “What do the differences between the metaphor and my practice/research tell me about my practice situation?” and “What am I trying to learn and improve?”

Another way that you can use metaphors is to “remodel the problem.” In Chapter 5, we looked at the example of the nurses who wanted to improve the discharge preparation process for children with respiratory problems. This problem—how to make sure that the children and their parents follow the proper procedures at home—could be remodeled into a simpler problem, like “How to take care of the new puppy.” Once the new problem is remodeled, you can brainstorm a list of things that you would need to do to take care of the new puppy. This could include making sure that it has the right food, taking it for walks, making sure that it gets the right vaccinations, and so on. Once you have that list, you can “back map”—ask, “What is the equivalent to taking the puppy for walks in the discharge preparation?” In this way, a metaphor—puppy care—is used to make a more complex, unfamiliar problem simpler and more familiar.

Narrative analysis

In Chapter 5, we described what is usually meant by narrative data. It is typically in the form of stories that are told by or about research participants, including the action researcher. Researchers who work with narrative data analyze them in different ways depending upon their ways of conceiving of what counts as research and knowledge. Polkinghorne (1995) provides a way of understanding the different approaches that can be taken. He begins by noting the difference between what Bruner (1986) called paradigmatic and narrative modes of thought. The paradigmatic mode is what we usually associate with scientific thinking. It typically attempts to explain and understand phenomena through the use of mathematics and logic. In using this mode, we identify categories or concepts that are related to one another to form some type of system. Although Bruner also referred to this mode as logico-scientific, it is also the way in which most qualitative data are analyzed. The coding of data, either through the use of preconceived or emergent categories, is an example of the use of paradigmatic thinking.

We use narrative modes of thought to understand the uniqueness of human action, which results from the interaction of a person’s previous learning and experiences, being in the present, and goals or purposes (Polkinghorne, 1995). When we think this way, we pay attention to the differences among people’s behavior with their spatial and temporal peculiarities, and represent them in the form of stories or narratives. The meaning in narrative comes about as a result of us using it as a frame to put together human actions as a series of episodes in order to understand past events and plan for the future (Polkinghorne, 1988). As individuals we store them in our memory, and as society as written, told, or enacted stories. We can then use them as analogies for the understanding of new human actions.

Both paradigmatic and narrative modes of thought can be used for the analysis of narratives. A paradigmatic mode of analysis is basically the

traditional ways in which qualitative data are analyzed, such as those described above, but in this case the data are in the form of narratives. Narrative modes of analysis use a process of emplotting the data to produce stories or narratives as the outcome of the analysis (Kim, 2016). The term emplotment comes from the work of Paul Ricoeur (2010). To Ricoeur, emplotment is what we do as human beings that allows us to intuitively combine otherwise unconnected events and actions into a narrative whole. In narrative analysis, emplotment is a technique used to connect data that consist of actions, events, and happenings to produce a coherent story. When we engage in emplotment intuitively, we fill the gaps between events so that they make sense to us as a continuous whole. The researcher engaging in narrative analysis does this for us through the process of narrative smoothing (Spence, 1986).

To Polkinghorne (1995), researchers engage in narrative analysis by organizing their data into a coherent, developmental account. He notes that while he refers to this as analysis, it is actually synthesis because the goal is to build an account rather than to separate into constituent parts. The data, which would be configured as chunks of narrative (for example, Labov & Waletzky, 1997), are organized in a way that moves along the plot of the narrative being developed by the researcher. As the plot is developed, it is tested against the data, and vice versa, through a recursive, hermeneutic process. As the plot develops, it should become apparent to the researcher which elements are crucial to the story and what data ought to be included in the final account. However, human experiences are not usually lived in the way that they are represented in carefully crafted stories. There are actions that we engage in that are extraneous to the story, and we live multiple stories simultaneously. The process of taking the disparate chunks of narrative and putting them together into a nicely flowing narrative account is what is meant by narrative smoothing. To Polkinghorne (1995), “the final story must fit the data while at the same time bringing an order and meaningfulness that is not apparent in the data themselves” (p. 16).

M6.7 Narrative analysis

Mishler (1995) developed a typology of different methods to engage in narrative analysis. They are:

- *Reconstructing the told from the telling.* To do this you take what is told to you or by you and put it into temporal order.
- *Imposing a told on the telling.* All of these methods require that you or the participants in your study relate in some way a set of events. However, in this method, the tellers are prompted, often through an interview, what to include in the story. For example,

you could ask your colleagues about what happened when they tried using a new teaching method. The stories that they tell can then be compared and contrasted to develop new understanding of how you go about using the same method.

- *Making a telling from the told.* Mishler also suggests that it is possible to construct a narrative from nonverbal data, such as photographs, drawings, or other artifacts. New understanding of human actions can be developed by telling and retelling different stories based on how we represent the same set of artifacts.
- *Recapitulating the told in the telling.* This is done by imposing a structure on what is told by the participants or the action researcher. One of the ways to do this is to use the structure for personal narratives developed by Labov and Waletzky (1997) (for more about this method, see Kim, 2016):
 - a Abstract: This is an introduction to or a summary of the story and its main points. Although it is first in the list, the abstract often cannot be written until the end of the analysis. It is also possible to write a tentative abstract before the analysis is complete and then compare it to the one that you construct later.
 - b Orientation: Readers need to have some context about the place, time, and people if they are to make sense of the story.
 - c Complicating action: All stories have a plot—a beginning, a middle, and an end. Often the orientation is at the beginning of the story, but then something must happen that causes us to continue to be interested in what is being told to us and to wonder, “What happens next?”
 - d Evaluation: A story has meaning to the teller. We can learn what it is through comments included in the narrative about why, for example, the events are important to the teller.
 - e Result or resolution: Most stories have an end in which loose ends are tied up or conflicts are resolved. In narrative analysis, there can be multiple resolutions from the perspective of the teller, the listener, and the one doing the analysis.
 - f Coda: Finally, how does the story bring us back to where we are? Do the lights just come up in the theater, or do we seek ways to connect what we heard to our present situations? Clearly, one can argue for the latter if the goal is to better understand our practice situations from the telling.
 - g If you have collected narrative data, you may want to try one of Mishler’s methods described above. You could start small, possibly with a simple anecdote that you fashion from the data using emplotment and narrative smoothing. This could eventually lead to a way of representing your action research to others as a coherent narrative.

Critical methods of analysis

The critical element of analysis should consist of two activities: checking the reliability of any evidence that substantiates a finding, and searching for any evidence *against* it. Both activities are important in testing the trustworthiness of findings. Both also contribute to their development: the first by enriching and enlarging them, the second by restricting and defining them and therefore clarifying and sharpening understanding.

It is important that the findings should be clearly formulated before this critical process begins so that they can be either confirmed or disproved by the data. This means relating interpretations to observations (for example, using the ladder of inference, see M5.1). The data must have the chance to “speak for itself”—even if the action researcher’s main interest is in finding supportive evidence to reduce the amount of work required, or to validate a chosen course of action. It is important to remain open to data that, rather than confirming your theories, question them, and therefore encourage further reflection. In the long run, this is an important part of justifying your confidence in your own practical theory. It does not imply denying your own convictions and judgments, which is impossible for practitioners (and is only an illusion for professional researchers). But it does imply a readiness to step back from your assumptions, look at the data, and be open to any evidence that is counter to your assumptions.

The critical analysis of findings is not only a question of procedures. Intellectual integrity and the determination to be honest with yourself and others are also important. All researchers are under pressure to be successful, especially when implementing and evaluating something new. The feeling that you have to prevail over your own insecurity and other people’s skepticism can threaten your willingness to accept unexpected results. It is, nevertheless, an important part of learning to become a researcher.

Testing the reliability of results is essentially a never-ending process and there can be no such thing as absolute reliability. Nevertheless, the research must stop somewhere because action research is directed toward practice and the practitioner’s responsibility to act (Feldman & Atkin, 1995). Another indication that it is time to finish is when it appears that collecting any additional data would yield nothing new in either a positive or a negative sense. This situation is called *saturation*. Because the research is intended to be useful to practice, there is not always time to wait for saturation. In any case, the critical process is not completed with the end of data analysis, but continues as ideas are translated into actions (see Chapter 7).

In Chapter 5, we discussed the issue of quality of action research. We presented a definition for validity that asks whether our representation of a phenomenon is accurate (Hammersley, 1992). We use critical methods

of analysis to try to ensure the accuracy of our representations, conclusions, or findings. In Chapter 5, we suggested several ways of doing this. They included:

(1) Considering alternative explanations; (2) testing through practical action; (3) ethical justification; (4) practicality; and (5) the use of triangulation. We now turn to two specific methods to test the accuracy of what we believe we have learned from our research.

M6.8 Testing the findings

Stearns, Greene, and David (1980) (quoted in Miles & Huberman, 1994) suggest a procedure for formulating and critically analyzing findings. This can be done using a computer with software such as *Inspiration* (www.inspiration.com), *N-Vivo* (www.qsrinternational.com), or any of the applications available that help to analyze qualitative data. Rather than demonstrate how Stearns et al.'s methods can be done using particular software, we describe how to do it using cards. This will help you visualize how it could then be done using the computer application.

- 1 Write a series of sentences on cards, each expressing one important result of your analysis (one sentence per card). The sentences are freely based on your experience, taken from notes (for example, your research notebook) or taken from hypotheses or analytical notes developed while coding data (for example, M6.2–M6.4).
- 2 Then sort the sentence cards into sets according to the issues to which they refer.
- 3 You then lay out each set of cards in a way that makes them easy to scrutinize and identify the relationships among them.
- 4 The next step is to check each card against your data. Any data that seem to relate to the sentence are cut out and placed beside the card.
- 5 Look again at the sentences, in light of the data that you selected, and expand, modify, and illustrate them, either by writing additional sentences and adding these to the layout of cards or by rewriting the original cards. In this way, the sentences and data make up the “backbone” of a written report, and if this procedure is followed with every single sentence, the report will be rich in detail and grounded in the data.

The following example is taken from action research into the support given to teacher education students when they are doing their practice teaching. Mentor teachers, university teachers, and the

teacher education students all wrote case studies that were analyzed as a group exercise during a seminar. The passage below was taken from one group's report. It shows the statement that was developed in step 5 and the data from the case studies that were used to check the statement (step 4).

Statement (developed from a sentence on a card):

The first few days of teaching experience in the introductory course to school practice are too soon to decide on a starting point for a case study, because students are too busy with the basic problems of their school practice.

Evidence for (+) and against (–) the statement, using data from the case studies (CS):

A teacher education student's statements (CS22/1):

- + *"It didn't seem to make sense to me that I had to write a case study at the beginning of the term."*
- + *"What could I use as a focus for a case study? Why can't I think of anything?"*

A mentor teacher's statements:

- *"(...) Case studies help to make problems in teaching become visible" (CS20/6).*
- *"Asking students to write case studies gives structure to lesson observations, practice teaching and reflection, and has become a useful tool that enables me to get away from the arbitrary jungle of talking about lessons" (CS20/7).*

M6.9 Communicative validation

Communicative validation is a method for checking the validity of an interpretation through establishing a consensus view between the researcher and a participant of the situation being researched, for example, between an interviewer and interviewee. Practitioners use this method when they tell a pupil, patient, or client their interpretation of what has been said. Concurrence is seen as an indication of the validity of the practitioner's interpretation.

Member checks can be used to seek communicative validation. In a member check, the researcher tests his or her data, interpretations, and conclusion with research participants (Lincoln & Guba, 1985). For an action researcher, this would mean discussing with pupils, patients, clients, family members, colleagues, and so on who inhabit your professional situation the meaning you have derived

from your data. Member checking can be done informally during your interactions with participants, or it can be done more formally by arranging meetings with participants individually or in groups. When done informally it provides the opportunity to check what the participant's intention was in saying or doing something. Rather than relying solely on your own interpretation of what you saw or heard, you can ask the person why he or she made the particular statement or took the particular action. It also provides the participant with the opportunity to add to his or her account, or to correct your misinterpretation (Lincoln & Guba, 1985).

The amount of agreement indicates the validity of the results of the analysis. However, as in all other cases, the validity that emerges through this communication process is fragile and temporary. The problem of power relations due to age, gender, race, or other status differentials can cause participants to say what they believe you want them to say. There is also the possibility that the participants are honest in their beliefs, but that their perceptions are skewed by societal beliefs or myths, or by the limitations of their own experience. Disagreement in interpretation, on the other hand, does not in principle devalue the result, but challenges the researcher to face the differences of opinion and explain them (see the example in Chapter 5).

Complex methods of data analysis

We now turn to two somewhat more complex methods of data analysis: pattern analysis and dilemma analysis.

Pattern analysis

A pattern is "A regular and intelligible form or sequence discernible in the way in which something happens or is done" (Oxford Dictionaries, 2016a). We naturally identify patterns in the world around us. It could be a design in the clothes we are wearing, in the paper on the walls that surround us, or in the floors on which we walk. We also find patterns in human behaviors. While the pattern in a design is part of the physical structure of the object, the patterns that we see in the natural world, including that of human behaviors, are imposed by our brains to make sense of the world, and to help us engage with other people.

Educational researchers have identified a variety of different patterns in the ways in which teachers verbally interact with students (Cazden & Beck, 2003). Often these patterns jump out at us when we know how to look for them. In the rest of our exploration of the use of pattern analysis, we rely upon an action research report written by a teacher of Germanic literature

in Austria (Sorger, 1989). We begin with a portion of a transcript of his class with 14-year-old pupils, which has been translated into English.

Extract from transcript of a lesson (18 April, 1989)

Mr. Sorger: *Well, first of all, here are some new worksheets ... You will get these worksheets for each chapter in literature from now on; on the left side you can always see what happened in literature at a given time. I've underlined the facts you should particularly try to remember. OK? That's work that you actually should have done yourselves. On the right hand side I've listed things that are characteristic for that time. Now, I have a question: What kinds of things are listed on the right? Who can explain to me what I've put there? Yes, Bernhard?*

Bernhard: *Historical facts.*

Mr. Sorger: *Well, historical facts! Is there anything else? Something special?*

Pupils: *(inaudible)*

Mr. Sorger: *Well, not only historical facts, but cultural facts.*

Pupils: *Dates, religious events, books.*

Mr. Sorger: *Yes, that too, there is a system! That's one part.*

Pupil: *First of all dates.*

Mr. Sorger: *First of all just historical facts.*

Pupil: *Then culture ... then comes art.*

Mr. Sorger: *Then art. I will present that in a similar way on each sheet from now on. Is that clear? On the left is literature, German literature. On the right historical events, cultural events, art, music and literature that is not German, if there is any. OK?*

(Lesson continues)

In this example, we see the simple and repeated pattern of alternating speech by Mr. Sorger and the pupils: after each time Mr. Sorger speaks, a pupil speaks, and so on. This is called the T-P-T pattern. This example shows some characteristics of patterns:

- 1 *Patterns select data*—from the data as a whole, only the data connected by patterns are selected. In doing this, certain data are emphasized, and other data unrelated to the pattern remain in the background. Even selected data are only seen from a certain perspective in relation to the pattern.
- 2 *Patterns structure data*—they organize the contents of the data. The order is discovered and at the same time constructed. This depends on the contents of the data but also on the prior knowledge, expectations, and ideas (theories) of the person who identifies the patterns. Patterns are segments of the dense network of interrelationships existing in the data or emerging from it.

- 3 *Patterns interpret data*—they are presumptions (hypotheses) about the nature of teaching and learning:
- *Each pattern presupposes that there could be an underlying order that is a key aspect of the teaching process.*
 - *Each pattern presupposes deeply rooted attitudes (for example, of the pupils/teacher toward their roles, etc.) that are keys to a better understanding of teaching.*
 - *Each pattern also assumes that it has effects, that it transmits messages that have influences (for example, on attitudes).*

Looked at on a more basic level, patterns indicate what is routine and habitual. They are usually largely unconscious, controlled by tacit knowledge hidden in unspoken routines.

How is pattern analysis done?

We want now to show how pattern analysis is done. We break up the process into five stages:

- 1 Identification of patterns;
- 2 Significance of the patterns;
- 3 Effects of the patterns;
- 4 Relationship between the pattern and the practitioner's intentions;
- 5 New actions.

Stage I Identification of patterns

During this first stage it is useful simply to describe patterns, starting from intuitive hunches and then trying to elaborate their characteristics and relationships (see Figure 6.5). One pattern has already been identified above. We called it the T-P-T pattern. It consists of a pupil's utterance in between two utterances by the teacher. When we take a closer look at what was actually said, we can see that there are several different ways in which this pattern can be played out. The extreme form of it, which is really T-T-T, is where the teacher asks a question, waits almost no time, and then answers the question him or herself. Another type is the "sentence completion pattern," which can be seen in another extract from the transcript below:

Mr. Sorger: *If they had no writing ... literature that hasn't been written down normally gets lost ... in theory ... I could imagine? ... Rudolf?*
Rudolf: *Oral tradition.*

In parts of the transcript that we have looked at so far, Mr. Sorger responds by "revoicing" the pupil's response, repeating or rephrasing it to use the

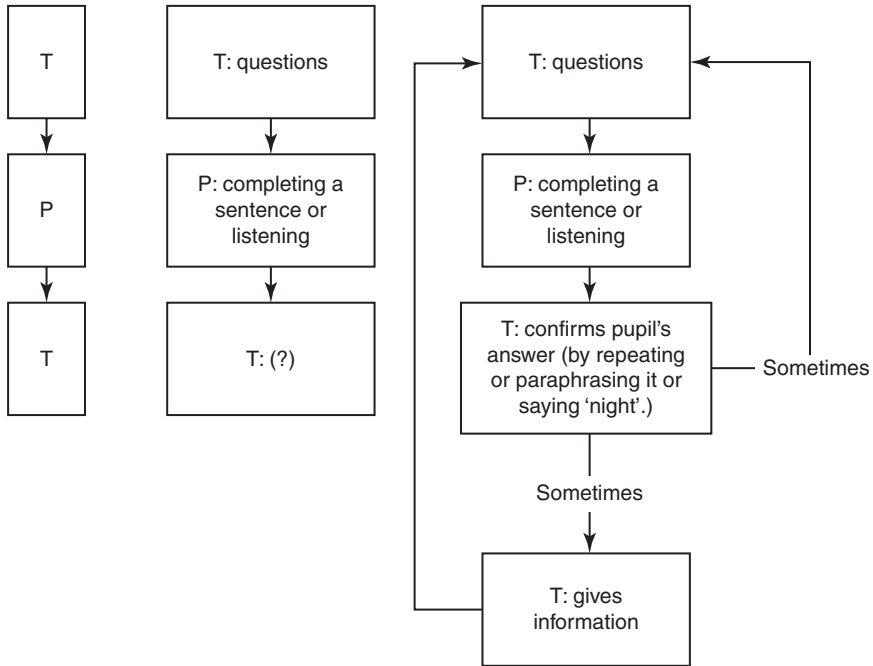


Figure 6.5 Development of the T-P-T pattern.

“correct” language. Sometimes the teacher will also evaluate the student’s response. This sequence is known as IRE because it consists of teaching initiation, student response, and then teacher evaluation (Mehan, 1979). According to Cazden (1988), it is the most common pattern of classroom discourse for all grade levels. This is illustrated in the following excerpt from the transcript:

Mr. Sorger: So a ritual is an action taking place according to certain rules. That means, normally everyone knows what he/she has to do at each stage of it, right? You might know of some rituals in everyday life today, can you think of any? Veronika ... Sandra?

Sandra: Daily meals.

Mr. Sorger: Yes, daily meals ... Totally right!

Another type of sequence is IRF, which consists of teacher initiation, pupil response, and then teacher follow-up (Wells, 1993). This sequence begins with either the teacher asking a question or introducing a topic. After a pupil responds, the teacher then uses the response to move the conversation forward. This sequence tends to be rare in classrooms. Rarer still are what we may think of as authentic discussions in

which the classroom discourse becomes more of a conversation among participants than an exchange mediated through the teacher. The patterns for these discussions may be T-P-P in which there are two or more pupil responses to one teacher question. In this pattern, the teacher may call on pupils without commenting on the previous pupil's response or intervening in the flow of ideas. There is even the possibility that a pupil could initiate the conversation with a question or comment, which is then responded to by other pupils, again without teacher intervention (P-P-P).

Although the examples that we have here are from teaching situations, patterns of behavior can be identified in any type of professional practice. This kind of regular pattern, whether it is between pupils and teachers, nurses and patients, or social workers and clients, is usually the result of unconscious routines that have been established through experience. Routine behavior should not be discounted, but it is important to ask to what extent these routines reinforce our aims and values, and what consequences they have (see, for example, the extensive research on the ways in which men and women interact verbally in groups).

Stage 2 Significance of the patterns

We can end our analysis with the identification of the patterns, and depending upon their effects, either change our behaviors or not.

However, it is also useful to think of the patterns as being the surface features of our assumptions, skills, intentions, or even fears. For example, what does it mean if a teacher embeds the pupils in his or her train of thought in the way expressed by the T-P-T pattern? First, it means that the teacher controls the way in which pupils respond to the subject matter. The most important control mechanisms are the questions the pupils are asked and the comments on their answers. If we look closely at the transcript it appears that Mr. Sorger's aim is to get the pupils to come up with ideas that fit his own thinking: he asks the questions in such a way as to maximize the likelihood of the pupils producing answers that meet his expectations. If a pupil does not give the answer he expects, or fails to answer, he ignores "the wrong answer" and rephrases the question to another pupil.

Remember that if we are investigating our own practice the transcript will in fact be a transcript of ourselves interacting with our pupils, patients, or clients. In this case, although we can attempt to reflect deeply on the meaning of the patterns, say through journal writing, it helps to have a conversation or be interviewed about our actions. This can be done as an analytic discourse in our research group or with our critical friend. Mr. Sorger was interviewed about the lesson, and here are some of his thoughts.

"I need some subject matter that I can examine."

"If they are afraid of being asked a question they pay attention."

"They have to know how they will be graded in the exam ... I am finding it more and more difficult to give grades."

"(Because I have so few periods with them) I can't afford to waste any time in the lessons."

"The pupils like it because it reduces the risk for them (of failing) ... If I asked questions in the exam which required interpretation of literature, I am afraid that some of them would fail."

"I like to separate the things that really matter (that is, their ability to respond to literature) from preparation for oral exams."

The next step would be for you, along with your research group or critical friend, to try to make sense of your statements in relation to the lesson. Here are some of what we believe were Mr. Sorger's assumptions that we inferred from the interview:

- He thinks that these patterns enable him to examine the pupils' knowledge in a way that is fair and not too stressful.
- He thinks that these patterns are good for discipline and ensure that the pupils pay attention.
- He thinks that this kind of teaching is expected of him and makes the best use of the time available.

Of course, when we make these types of inferences, we need to be aware of the ladder of inference and to try not to climb too high based on limited data. Also, when we make interpretations like these, it would be important to check with the teacher to see whether they make sense to him.

The interpretation placed on a pattern should be plausible in the context and fit in with the analysis as a whole. This is the best way of deciding whether or not a possible pattern is of value. We recommend that you read relevant passages of a transcript several times, looking closely for emerging associations. In this way, you can pick up important clues as to the pattern's meaning and its importance to you and the part it plays in your professional self-image. It is not a good idea to discount too quickly those patterns you or others do not like, because they nearly always have some significance and you rarely gain anything by ignoring them. Equally, before changing routine patterns you should at least partially understand their meaning and the part they play in the complex system of your practice.

Stage 3 Effects of the patterns

Your analysis of the transcript could end with the uncovering of your assumptions and intentions. However, an important part of professional

practice is the effects of our work on our pupils, patients, or clients. Even an analysis of the complete transcript of Mr. Sorger's lesson does not tell us much about the effects of the patterns on the pupils. Those pupils who took an active part appear to have accepted the pattern, been able to work with it, and even seemed to force the teacher to stick to it. However, the majority of pupils did not take part, so it is conceivable that they did not accept the pattern and as a result did not volunteer answers or reply to the teacher's questions. As a way of delving into the pupils' beliefs and feelings about the pattern, Mr. Sorger interviewed three of the pupils about his way of asking questions. Here is his summary of their answers (Sorger, 1989):

- *The way questions are asked makes it relatively clear to the pupils what is expected of them.*
- *The pupils feel involved in the lesson, even if only through the "risk of being caught out if your mind wanders."*

For the pupils these patterns of interaction with their teacher obviously offer a clear framework in preparation for the examination, both in terms of subject matter and the format of the exam. Let's speculate on other possible consequences of the T-P-T pattern:

- *What effect does it have on the atmosphere in class? Is Mr. Sorger right in his assumption that the pupils are satisfied with it? Are they all satisfied? On what does he base this belief?* When an analysis is done of the complete transcript it is apparent that at least six pupils made oral contributions and in addition there were times when several pupils were talking at once. This indicates that a number of pupils appear to be happy with this teaching method, but the data do not tell us how many. We get some indication of the general atmosphere from the number of voluntary contributions made by pupils (without being asked by name). The percentage is about 70 percent of all contributions (although this is difficult to judge from the transcript).
- *What effect does it have on learning?* It is even more difficult to get clues from the transcript as to how much the pupils were learning. According to Mr. Sorger, the pupils were adequately prepared for the exam, which means, they learned what he wanted them to know in the exam. Although we have no transcript of the oral exam, we can assume that the same patterns occur, so that the lessons can be seen as training for oral exams.
- *What consequences does it have on teaching?* Teaching that uses this pattern could be described as "close guidance." The teacher decides on the learning task by asking the questions, he decides on the subject matter and its organization by the format of his questions, and he

defines the quality of pupils' answers by his comments, which at the same time allow him to give additional information. A strength of close guidance of this kind is that information can be tailored to the pupils' needs (or, at least, to the needs of those who contribute). A further strength is that it helps the students to prepare for—and the teacher to plan—the exam. A weakness is that knowledge acquisition is implicitly defined as answering set questions. This kind of teaching would be unlikely to make a significant contribution to the pupils' ability to think independently. This appears to be a concern of Mr. Sorger, as we will see below.

Any pattern will have a number of effects. The effect of a pattern depends on the situation in which it occurs and on the personality traits and abilities of those concerned. For this reason, we recommend that you always look for a number of possible effects, to prevent being blinkered by the first one that comes to mind. Sometimes some effects can be identified in the transcript itself, but normally you will need to collect more data.

Stage 4 Relationship between the pattern and the practitioner's intentions

A close analysis of an example of your actual practice can illuminate the relationship between your intentions and the effects of your actions. For example, when discussing the transcript of the lesson, Mr. Sorger said, "I'm not happy with using it [the T-P-T pattern]." It seems that he has teaching aims that are not in line with the pattern. What are they? Does he want his pupils to move beyond the acquisition of facts to an understanding of concepts and theories? Does it bother him that the pattern might encourage them to learn for the sake of the exam rather than out of their own interest in the subject? His action research report gives some clues (Sorger, 1989, pp. 95–105):

Only then did my real problem begin to emerge. I have to give grades, so I must teach things I can test, and (at the same time) I want them to know what is likely to come up in the exam; but, on the other hand, the aims that are important in studying literature and the kinds of tasks that would support those aims are very different. I just submit to the pressure of circumstances.

This suggests that he feels under pressure and is unable to achieve the aims that he really considers worthwhile. At this stage of the analysis it is important to consider these "real" aims, as well as the blocks to achieving them. Reflecting on these issues can give new perspectives that help in bringing about improvements.

Stage 5 New actions

If the effects of the patterns do not match our intentions, what new action strategies should we develop? What strengths can we call on to improve our practice? One way to develop new action strategies is to identify and develop those patterns whose effects potentially match your intentions better than others. Mr. Sorger decided that he could respond to students in a way that would draw them out, using the IRF sequence described above:

- Mr. Sorger: So-called magical poetry, the magic spells. They are usually short spells—having what purpose? Martha? ... Edith? ... Rudolf?*
- Rudolf: Well, making people believe something!*
- Mr. Sorger: I don't understand what you mean. I don't follow that. What do you mean by that?*

Pattern analysis is a creative process in which a practitioner begins a “conversation” with the reality of his/her practice from transcripts of interactions with pupils, patients, or clients. The process of pattern analysis does not consist merely of identifying existing patterns, but is an active process of constructing personal meaning by relating intentions to what is perceived to be happening in reality. On the other hand, this construction is not a purely personal matter, as the data (the transcripts) act as a frame of reference providing evidence of particular patterns and therefore making it possible to discuss them with your research group or critical friend.

M6.10 Pattern analysis

The purpose of this activity is for you to try out pattern analysis of your own practice.

- 1 Audio record a group interaction from your practice, for example, a classroom, a committee meeting, or a session with patients or clients.
- 2 Select a 10 to 15-minute extract to transcribe word for word (see M5.8), and number the lines.
- 3 Read and re-read the transcript and highlight any pattern that repeats or that you know is repeated on other occasions.
- 4 Make a list of the patterns in neutral language that does not suggest that they are positive or negative. Refer each pattern to the line numbers in the transcript where it can be observed.
- 5 Discuss your pattern analysis with your research group, a critical friend, or other participants.

Dilemma analysis

A dilemma is a situation in which a person must choose one of two or more alternatives. As one might expect, practitioners, who work on a daily basis with other people, can find themselves facing major dilemmas. Therapists often find themselves in a situation in which they could give a client advice that they believe is good advice, but are reluctant to do so because it may interfere with the therapy (Kramer, 1997). In the US, teachers and other care givers are required by law to report instances of drug use or physical or sexual abuse. Often pupils, patients, or clients will only confide in them if they are promised confidentiality.

There are, however, other dilemmas that are not so major that are inherent in practitioners' work and can be made explicit through action research. Once explicit, they can be used to examine one's work in order to come to understand it better and to improve it. This data analysis method is called *dilemma analysis* (Winter, 1982). Dilemma analysis is based on the notion that practitioners are continually faced with dilemmas that require professional decision making. In most cases, these dilemmas can be expressed in the following terms: "on the one hand ... on the other hand ..."

Here is an example of a dilemma:

On the one hand, it is important to keep an overview of the classroom to ensure that every pupil is getting on with his or her work. On the other hand, it is important to engage individual pupils or small groups in discussion, from time to time, so as to encourage them to think deeply about concepts and problems (which will require your full attention).

Another example comes from the collaborative action research done by a group of US physics teachers who were implementing a new curriculum (Feldman & Kropf, 1999). The curriculum was designed to help students gain a deep understanding of a small number of concepts. The teachers liked the idea of having their best students use the curriculum because they would most likely study physics again at university. However, they found themselves in a dilemma with their other students who most likely would never take another physics course:

On the one hand, if they used the curriculum some students would really understand the physics that they learned. On the other hand, other students would not be exposed to many other topics in physics, which might have enticed them to study more physics.

Dilemma analysis is not as difficult as the name seems to indicate. As an example, we will look at a short extract from the interview with Mr. Sorger, the teacher of German literature. As you read it, see if you notice

any of the tensions and decision points. We suggest that a good way of going about it is to work with your research group or critical friend: begin by reading through the data, individually, and mark any places where you note inconsistency, tentativeness, or decisions; then talk over what you have found and, together, draw up a preliminary list of dilemmas.

I have just had the autumn exams. This time, when I was setting the questions, a lot of things had become clearer and I thought, what shall I do now? I could move away from teaching and examining factual knowledge more or less totally, and just work on the texts, and judge the students right from the start on the quality of their responses. But this is where my social responsibility comes in. If I did that, I could be accused of only wanting to create an elite. It would mean that those who are intelligent, who can make the links, who actually don't need me as a teacher, strictly speaking, but would learn anyway, would be favored and the others would be neglected. I have to take these things into consideration, because the ones who need my help to widen their mental horizons are more important to me than the ones who have a wide mental horizon already. And this is the reason for my emphasis on facts and testing facts—so that they can climb this mountain. But by doing this I narrow their chances of doing anything independently.

Everyone may find different dilemmas in analyzing any text, because there is a tendency to pick up on points that resonate with your own experience. Compare your own outcome with our analysis. We found that the following tensions emerged from the interview:

- On the one hand, the teacher wants to get away from teaching and examining facts and would rather just “work on the texts.” On the other hand, this would imply judging the pupils on the quality of their thinking and their responses to the text and would lay him open to the accusation of “creating an elite” and favoring those who need his help least.
- On the one hand, testing factual knowledge should help those who are unable to “climb the mountain” when working on texts. On the other hand, by doing this he restricts their chances of learning to work independently.

How to carry out dilemma analysis

STAGE I FINDING DILEMMAS

It is not difficult to find dilemmas. You will probably find there are quite a number. In carrying out dilemma analysis, data are selected, structured, and interpreted so that contradictions come to light rather than commonalities. This method of analysis is easier when applied to data that

interpret social reality and reveal its tensions (for example, interview data) rather than data that focus on actions and events (for example, observation data). It also helps to discuss your data with your research group or critical friend.

STAGE 2 FORMULATING AND EXPLORING DILEMMAS

Once you have found dilemmas in your practice the second stage of the process is to formulate them in a way that further exposes the conflict in the dilemma. One way of doing this is through the linguistic structure “on the one hand ... on the other hand ...” that we illustrated in the above examples. Once you have formulated the dilemmas you can delve more deeply into trying to understand what effects they have on your practice. We think the following pragmatic approaches are helpful. They are drawn from examples taken from the interview quoted earlier in this chapter:

1 Is the dilemma solvable?

Many dilemmas express contradictory and unavoidable aspects of situations so that they cannot be resolved by any course of action. An example is the contradiction between the desire for autonomy and the need to work within rules and structures. In this era of accountability, most practitioners find themselves increasingly bound by rules and structures that restrict and constrain their practice. One example is the increasing use of high-stakes standardized exams in the US and elsewhere. Teachers find themselves bound both by the legal requirements and by the ethical imperative that they prepare their pupils as well as possible for the exams. This leads them to the conclusion that they must cover a lot of material and use drill and practice techniques. This conflicts with their desire to make their classrooms places where pupils can explore content in ways that allow them to gain deep conceptual understanding of the subject matter. This dilemma can be formulated as:

On the one hand, I need to do my best to prepare my students for the high-stakes exams. On the other hand, if I focus on coverage and use drill and practice, my students won't have the opportunity to truly understand the subject matter.

2 Is the dilemma related to the complexity of the situation, which makes it difficult to see what is happening?

Many dilemmas result from having to act in situations where many factors are unclear, and causes and effects are only partly understood. This can result in the either/or representation of the dilemma when in fact there is a wide range of options available. For example, the dilemma that

we described above becomes less dilemmatic when the complexity of the situation is exposed. It is possible for the teacher to use a variety of methods, including those that both help prepare the students for the mechanical part of the exam (drill and practice) and help develop deep understanding (problem-based instruction, essay writing, and so on). It is also possible for the teacher to identify a few core concepts for more in-depth treatment and use the drill and practice techniques for the other topics. We call this “going around the dilemma” in the same way that it may be easier to go around the mountain than climb over it.

3 Is the dilemma emotionally stressful?

Emotional stress often results from believing that you have to take some course of action that goes against your instinctive judgment. Clearly the example that we gave above of the legal reporting requirement can result in emotional stress. We want to help our pupils, patients, or clients, but we cannot unless they confide in us. If they do, we must report what is said to the authorities. But if we don’t promise confidentiality, they won’t confide in us. Do we break the law so that we can help our pupil, patient, or client, or do we stand by the law, not promise confidentiality, and not have the opportunity to help them? Again, there is the possibility of resolving this dilemma by examining its complexities and seeking a way to negotiate a different set of conditions that allow you to get past the enormity of the mountain facing you by seeking an alternative route around it. We recognize that especially in this example, it is not easy to find that alternate route. But often we find ourselves faced with stressful dilemmas because we are missing information or because we have insufficient knowledge or skills. In the same way that we would want the help of a guide when we travel in unfamiliar territory, it makes sense to seek the counsel of others, including members of your collaborative action research group, your critical friend, and knowledgeable outsiders.

STAGE 3 WORKING ON DILEMMAS

We work on dilemmas to solve them if possible. Even if a dilemma is at first judged to be “unsolvable” we can still look for acceptable ways to cope with it. Just talking about a dilemma with your research group or critical friend may give rise to ideas for solutions. Unfortunately, it is impossible to give any generalized explanation of how to deal with dilemmas. Instead, we will return to the case of the teacher of German literature, Mr. Sorger, as an example of how to understand dilemmas better, explain them, and derive action strategies from them.

In comparing his statements with some of the things his pupils said, an interesting contradiction emerged: On the one hand, he wants the pupils to respond to literature critically and become independent in their

thinking. On the other hand, the pupils said in the interview that they pay better attention when the teacher asks them questions, because it is embarrassing for them being “caught” if they don’t know something they are asked, and it is boring without questions like this. The teacher’s and the pupils’ aims seem to be clearly contradictory.

When we take a closer look at this dilemma it becomes even more complicated. Mr. Sorger’s statement contradicts other statements he has made: he does want the pupils to acquire knowledge of facts. The pupils’ statements are also not free of contradictions: in another statement, they say that lessons in which you have to think for yourself and find things out on your own are much more interesting than other lessons. Obviously, there are other reasons why the pupils work, as well as wanting to avoid embarrassment when caught not paying attention to the lesson.

It seems as if during lessons neither teachers nor pupils always do what they themselves consider valuable (taking a longer view). They are busy with “content-oriented” learning, with passing on knowledge (teacher), and with remembering and reproducing knowledge (pupils). But they also want to support independent thinking (teacher) and think for themselves and discover things (pupils), that is, defining and working on problems.

How can these contradictions be explained? One possible explanation could be that these two kinds of teaching and learning contain different levels of risk for both pupils and teachers. Problem-oriented work (“thinking for yourself”) offers less security than the acquisition of knowledge. The pupil has to go beyond the information offered by the teacher and work with it using his or her existing knowledge. So, there is a danger of not coming up to the teacher’s expectations.

Under what circumstances will a situation like this be seen as a risk? Possibly when the pupil regards the lessons as a form of trade (grades for effort) and when, as a result, the economic principle holds sway (maximum results for minimum effort). In these circumstances, the pupils become interested in making a good “deal” (as good a grade as possible, with as little effort as possible) and reducing the risk of poor grades. This may also be true for teachers in a similar way. They are interested in pupils who achieve something, take part in the lesson, and are well behaved. They get achievements and good behavior more easily if they restrict themselves to asking only for the knowledge they have already given the pupils. In this way, the risk of failure for teachers is also kept very low (Doyle, 1992; Feldman et al., 1998).

Even in a case where a dilemma at first appears to be “unsolvable,” analyzing it can help to understand it better and find an acceptable *modus vivendi*. We believe that a useful outcome of the analysis can be that you begin to accept the dilemma as something “normal” and this reduces any frustration resulting from it (for example, frustration in feeling “whatever I do conflicts with something I believe to be important”). A dilemma

can also be discussed with your pupils, patients, or clients: for example, a teacher could check the extent of pupils' interest in problem-oriented work to find out how much support there would be for some work of this kind in the daily routine.

The function of dilemma analysis

Analyzing and working on dilemmas may be important in the following ways:

- *Valuing minority views.* Views that are taboo or not discussed for other reasons (for example, because those holding them do not have enough power) can be expressed in the form of dilemmas. By juxtaposing different views, the common phenomenon of the "social hierarchy of credibility" may be overcome. Problems are presented in a way that is not too threatening, making it possible to discuss them and analyze them rationally. Minority views are not only a social phenomenon. Within each person's mind, there are views that are devalued and repressed, but that nonetheless have consequences of which we are not aware. Dilemma analysis can help in pointing out our personal minority views, which makes it possible to have a closer look at them and deal with them.
- *Reducing stress.* Dilemma analysis is an alternative to searching for definite answers that can only solve one tension at the expense of increasing another one. If we accept that contrary perspectives can be enriching, we experience emotional relief. Our energy is freed to search for ways of dealing with dilemmas that we can accept.
- *Enabling discussion.* Winter (1982) developed dilemma analysis in order to introduce an egalitarian note to discussions between student teachers, their teacher mentors, and college supervisors. Through dilemma analysis he was able to ascribe equal value to students' perspectives and the perspectives of those who had a higher status in the social context. In a similar way, dilemmas can facilitate discussions between pupils, patients or clients, family members, and community groups, or between colleagues. The discussion is likely to be more stimulating and productive if the issues to be discussed are expressed in terms of dilemmas.

M6.11 Dilemma analysis

The purpose of this activity is for you to try out dilemma analysis.

- 1 Choose a piece of your data that deals in depth with decisions that have to be made. It may be interviews with two or three people who share the same interest or work together but have different roles; an interview that a colleague has carried out on

yourself about what you find problematic in your work; or some pages from your research notebook in which you have written in depth about something problematic.

- 2 Read the data carefully several times looking for indications that something is difficult to decide, creates tension, or is problematic.
- 3 Clarify the issue by describing it in a short note using the phrasing, "On the one hand ... On the other hand ...". The idea here is to explain the reasons why you might take multiple courses of action. If you are looking at data from two or more people, you may find that they have different assumptions springing from their different roles (the power that they have).
- 4 Produce a discussion sheet in which you list all the dilemmas that you have found, being careful to express them in neutral language.
- 5 Hold a discussion between yourself and your critical friend, your interviewer, the colleagues involved in your analysis, or your research group.
- 6 The aim of dilemma analysis is to clarify the understanding of those involved in the discussion of what the key issues are. In some cases, this may assist in better decision making. In others, it may be useful to know that there is no easy solution to stressful situations.

Developing action strategies and putting them into practice

In this chapter, we want to look particularly at developing action strategies and putting them into practice. As we have made clear in earlier chapters, one of the most important uses of the knowledge that you generate about your practice is to put it into action. Because the focus of action research can be on an individual's practice or on the practice of a group, in this chapter we will make explicit that the process of developing and implementing action strategies may often be done collaboratively.

Transforming the knowledge and insights developed through action research into practical action is also a way of testing the theories you have developed. It enables us to ask the question, "Does my/our practical theory about this situation stand the test of being put into practice or do I/we have to develop, modify, or change it?" In practical terms, action researchers ask the following questions at this stage:

- How can I/we develop action strategies that fit my/our practical theories and that are likely to improve the situation?
- How can I/we select appropriate action strategies from the range of alternatives available?
- How can I/we develop and put into place the action strategies I/we want to try out?
- How can I/we monitor the effects of the action strategies and record the outcomes?

These are all questions that will be explored in some detail in this chapter. Before we do so, we want to remind you that we see action research as a more extended process that includes mini-cycles of refining starting points, collecting and analyzing data, and taking action. You shouldn't feel that you need to progress through all the preceding chapters in order to finally get to the point where you will take actions as part of your action research. As a practitioner you are always taking actions within your practice situation. The mini-action research cycles allow you to use your ongoing research to positively influence your ongoing practice.

Practical action as an integral part of research

Rhonda Leslie is a teacher of American Sign Language (ASL) to hearing students in a high school in the US. In her school, ASL is taught as a second language and fulfills the same requirement as learning a world language, such as German, Spanish, Chinese, or Russian. In recent years, interest had been growing in learning ASL, and for the first time in many years a third year of study was being offered. Rhonda was given textbooks that were almost 30 years old and began to use them with her pupils. The pupils had a highly negative response to having to use curriculum materials that they found to be outdated and boring. As part of the action research that she was doing for a graduate seminar in action research, she searched the literature, wrote in her research notebook, and conferred with her classmates, colleagues, and the course instructor (Allan, one of the authors of this book). She decided to have her pupils engage in “real, relevant situations for students to apply language learning” (Leslie, 2016, p. 5). This included telling each other stories and engaging in conversations about their lives using ASL as a way to learn vocabulary. Once she began to include these types of activities she found the pupils became much more engaged and she no longer saw behaviors like putting heads down on desks or texting with their smart phones. As a follow-up, Rhonda surveyed her pupils to find out how they felt about the new approach when compared with the previous reliance on the textbook. Although all of the pupils responded that they would more likely be engaged by material that was tailored to their interests, nearly half of them said that they would prefer to learn ASL vocabulary by rote.

As this vignette shows, by putting her action strategy into practice she encountered some success, but also encountered a dilemma or dissonance in her practice. These can lead to additional questions, like why so many students preferred to learn using the “boring” methods rather than what they thought engaged them more. Was there something missing in her practical theory? Which important conditions had been neglected? What alternative action strategies would be possible? Such deliberations could eventually lead to a better understanding of the situation, but as Rhonda concluded, she would need to collect additional data to uncover why the students felt this way (Leslie, 2016).

Action research is undertaken by practitioners to improve their practice in addition to coming to a better understanding of it. For practitioners it is not enough to develop theories about a situation: they also want to change the situation, as a result of their new knowledge, to improve the conditions for themselves and their pupils, patients, or clients. To make it worth investing time and energy in research, which after all cuts across both professional and private life, teachers, nurses, social workers, or other practitioners must go beyond the generation of new knowledge and theories and, in addition, make improvements in their practice situation.

Developing action strategies in practice, however, means more than just making practical use of research results. It is itself a part of the research process. In planning action strategies, we formulate the outcomes of analysis as a preliminary practical theory. In developing action strategies in practice, we test the outcomes of analysis and thus, indirectly, test the preliminary practical theory (see Chapter 5). From the success or failure (most often a mixture of the two) of our carefully planned action strategies we can evaluate aspects of our practical theory, and find out in what ways it needs to be developed, modified, or radically revised.

Action research is characterized by a close interrelationship of action and reflection (see Chapter 10). Another way of putting this is to say that using research results to improve practice, by means of developing action strategies, is an integral part of action research. The trustworthiness of research results is not established by clever analysis based on any specific theory, or by rigorously applying a set of validation procedures, but rather by a process of interrelating research and action. By continuously putting reflection into action, and subjecting action to further reflection, both the theories developed from reflection and the stock of action strategies are extended, subjected to analysis, and improved.

Some people say that research is a “never-ending task.” Is this also true of action research? It certainly applies to day-to-day professional reflection. Action research, however, is day-to-day reflection made more systematic and intensive. Thus, action research concentrates for a specific period of time on issues that deserve close scrutiny, but it will finish for pragmatic reasons, even if some questions are unanswered and need further investigation because:

- The action researcher(s) is/are reasonably satisfied with the outcome;
- He/she/they has/have to cope with another task that will consume all available energy;
- He/she/they simply need(s) a rest from extra demands.

Another way to think about this is with the advice given by Rabbi Tarfon, “It is not your responsibility to finish the work, but neither are you free to desist from it” (Sefaria, n.d.). To us this means that improving one’s practice, gaining a better understanding of it, and sharing what we learn with others is a never-ending task. However, it is not one that we need to finish. This is because as we engage in action research we become part of a greater project that includes other practitioners and researchers as we seek to improve our and others’ practice situations.

The taking of action is an integral part of action research because a major part of doing it is to try out our ideas, practical theories, or hypotheses (for example, Elliott, 1991; Feldman, 1996). In fact, trying out action strategies may be thought of as a kind of *field experiment*. John Dewey

suggested this in his book *The Sources of a Science of Education* (1929). In the section entitled 'The Teacher as Investigator,' he argued that it was important for classroom teachers to engage in what he described as the scientific study of education: "systematic methods of inquiry, which, when they are brought to bear on a range of facts, enable us to understand them better and to control them more intelligently, less haphazardly and with less routine" (pp. 8–9). To Dewey, an important part of these systematic methods is the testing of the hypotheses that emerge from reflection on practice (Rodgers, 2002).

Field experiments were also an important part of the way in which Kurt Lewin conceived of action research. In one of his earliest descriptions of action research (1946), he described the process as one of reconnaissance, planning, executing, followed by additional reconnaissance for the purposes of evaluating the results of the actions. That evaluation is then used to modify the overall plan. To Lewin, this constituted a change experiment that could result in social changes that were not being seen when outside experts presented their findings to practitioners (see Chapter 10; Adelman, 1993; and Feldman, 2017 for additional information about Lewin and the origins of action research).

We believe that we need to offer one caveat about the use of the term "experiment." There has been a recent call for educational research to be "more scientific" and to rely more on experimental methods (Institute of Education Sciences, 2013; Shavelson, Phillips, Towne, & Feuer, 2003). Those who favor this position have a particular understanding of the word "experiment." While they do not necessarily mean laboratory-based experiments, there is the understanding that an experiment should use random samples and highly controlled variables to test hypotheses. While we believe that field experiments are a way to test out hypotheses that are based on practical theories, we use the term experiment more loosely, similarly to how Dewey and Lewin used it, to refer to the systematic and reflective trying-out of practice strategies.

What are action strategies?

Up to now we have used the term *action strategies* without defining it. Let us now give some examples. In the introductory example of this chapter, a teacher tried to better engage her pupils in the learning of ASL. She developed an action strategy, namely to provide the pupils with "real, relevant situations ... to apply language learning." Another example of an action strategy is one that was developed by Jay Odaffer for his teaching of the geographical significance of environmental problems. This was part of a course that he taught at a community college in the US. Because of the large number of students enrolled in the course, he taught it lecture-style using PowerPoint and a projector. He had noticed over the years that

he taught the course that his students appeared to have little knowledge of geography.

I found that most of my students did not know the location or relationships between major land formations, (the Sahara, the Amazon, and the Himalayas). To clarify, they know of these places as a thing; that is, they can identify them as a desert or a mountain range, but could not place them on a world map. To truly understand the concepts of the course, the students need to understand not only the location, but also the size of the landforms, their interactions with nearby environments and the relationships of political boundaries.

(Odaffer, 2010, p. 2)

Because of this, he believed that he needed to teach the students geography before they could learn about the causes and nature of environmental problems. During the reconnaissance that he did as part of his action research project, Jay found that his students were mesmerized when he used Google Earth (<https://earth.google.com>). From conversations with them he learned that they could connect different places around the earth as he “flew” with the application from place to place. As his action strategy he decided to incorporate the use of Google Earth into his lectures whenever possible, hoping to improve his students’ understanding of geography as related to environmental science.

By the end of the first four weeks, the students would stop me in mid-lecture and ask for Google Earth. If I was lecturing about volcanoes, they demanded to see volcanoes. They would name some of the volcanoes that they had heard of, (i.e. Hawaii and Vesuvius), then I would then show them others that they did not know about, like a smoking mountain in Ecuador, or a 3-mile wide crater in Indonesia. One day I lost track of time, none of the students said anything about the time either. I looked up and we were five minutes past the end of the class. No one had “packed up” yet!

(p. 2)

In a third example, a university teacher was attempting to develop her course on ‘Statistics in the social sciences,’ which, she felt, needed improvement (see Altrichter, 1986a). A graphical reconstruction of the situation, after the first cycle of investigation, is set out in Figure 7.1.

Whenever she introduces a new concept she begins by explaining it in words (1). Then she does an example on the blackboard (2) and afterwards she asks the students to do another exercise in their books (3). Usually, the students have difficulty in understanding (4) because the concept is difficult and too much information is being given all at once. If she feels that she is not explaining things clearly, or the students show signs of not

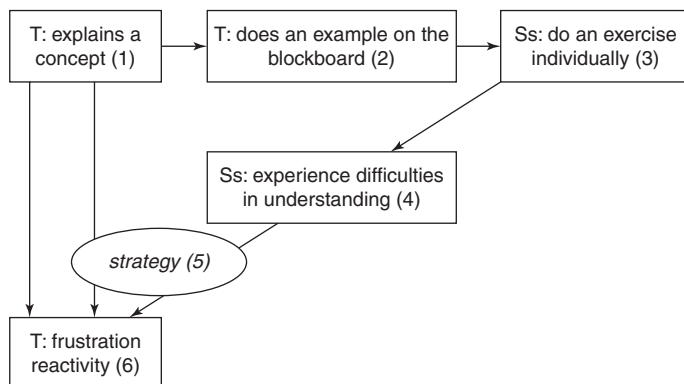


Figure 7.1 Redrawn from an excerpt from a graphical reconstruction—‘Course on statistics.’

understanding, she can feel herself becoming tense and she tries to explain again. However, this makes her teaching become jerky and even less clear. When interviewed she said:

My behavior is “reactive.” Whenever something unexpected pops up or I pick some sign that they are not understanding, I react immediately and abandon my lesson plan. I must learn to observe these things and store them away to think about later, without being put off my track.

(Altrichter, 1986a, p. 30)

On the basis of this interpretation of the situation the teacher decided upon action strategies, including this one: *to take a deep breath*—(5) in Figure 7.1. Whenever she felt that her explanation was becoming nervous, jerky, and difficult to understand, the teacher decided that she would “take a deep breath.” In this way, she hoped to avoid these nervous reactions. In the “breathing space,” she hoped to be able to think whether it was actually necessary to abandon her planned sequence of explanations. Through this strategy she hoped to break the vicious circle of quick and unthinking changes to her lesson plan that she was finding annoying and that she also thought were getting in the way of the students’ learning.

We will return later in this chapter to discussing why it is not always easy to translate a “good intention” like this into action. When an action strategy is developed from the analysis of practice it is important to be able to relate the strategy to a specific point in the analysis. You may find it helpful to draw a diagram, such as the one shown in Figure 7.1, to show how it relates to your action research.

All action strategies share several characteristics. First, they are actions that you plan and put into practice in order to improve your practice situation. Therefore, they are connected to your aims and goals, and are typically tightly linked to your practical theories. Second, they can be thought

of as preliminary answers to your questions or “experimental” solutions to the problem you are investigating. Third, the type of action strategy is dependent on the nature of the practice situation. For example, it is difficult to make changes in complex social situations with one single action. Therefore, an action strategy may consist of a number of coordinated actions planned on the basis of the action research. Action strategies also differ in the extent of change that the action researcher seeks. For example, one teacher might decide to make profound changes to her whole style of teaching to give the pupils much greater autonomy in learning, whereas the university teacher in our last example has basically kept her style of working but adapted it by making some slight changes in her behavior. This last example reminds us that not all action strategies are significant and radical breaks with existing practice. Researching and analyzing a situation may just as easily lead to corroboration of existing practice and underlying theories. In some cases, there may be no visible changes in terms of actions, although views and attitudes are greatly changed.

When we think about what constitutes an action strategy, we also need to consider what types of results to expect. First, it is important to remember that change is usually a long-term process, in the course of which several single elements of a system begin to move and action strategies have to be adapted and modified. Action research usually proceeds through several cycles of researching, planning, acting, and evaluating the results of the actions, which informs the next cycle. Therefore, planning action strategically means being prepared to learn from the outcomes of the set of changes and using that to inform the next action strategies.

Second, we need to be critical in our thinking about what constitutes a successful action strategy. On the immediate level, we might consider them “successful” if our desired effects come about without unexpected, negative side effects. However, they may also be successful if they provide us with new insights into our practice. As with any type of field or change experiment, null or negative results can provide the opportunity to modify one’s understanding or practical theories about a practice situation. In addition, as with any type of action taken in a social situation, there may be unforeseen side effects. These unexpected outcomes have to be judged in terms of our aims. We do not simply ask “Did we achieve the ends we set?” but rather “Do we like what we get?” (Schön, 1983, p. 141).

Third, when we speak of “improvement” or “solving a problem,” we do not mean to imply that all the problems of professional practice can be “solved” satisfactorily. Sometimes the analysis of a problem shows that important, contributory factors lie outside our sphere of influence (for example, a patient’s prior history, the resources of the clinic). “Solving a problem” in a case like this often does not mean making it vanish, but developing a different attitude toward the problem that helps to limit personal strain. Often a change in attitude makes it possible to make a number

of small changes that are helpful, but that previously did not seem to be worth the effort.

Finally, we need to consider the possibility that the action researcher took no action even though there was good opportunity to do so. Sometimes these possibilities can be identified through the use of a diagram, like Figure 7.1. Diagrams quickly show the points in the practical theory at which no action is being taken. This leads to questions such as “Why not?” “Would there be any side effects if these aspects of the situation are neglected?” Diagrams also show whether action strategies are planned that do not actually arise from the practical theory. Sometimes this indicates a routine “ad hoc strategy” that cannot be justified by the analysis of the data. More often, however, such a “floating” action strategy points to some incompleteness in the analysis in which the action strategy expresses intuitive knowledge about the situation that would not otherwise have been made explicit. Reflecting on the floating action strategy helps to extend the practical theory.

How can I/we find a variety of suitable action strategies?

So far in this chapter we have presented some information about the importance of action strategies for improving and coming to a better understanding of practice, their characteristics, and several examples of how educators have enacted action strategies. Now we turn to ways to find and develop suitable action strategies. As with most decisions about what we want or ought to do, it makes sense to begin by reminding ourselves of our own *aims, objectives, and values as practitioners*. What exactly ought to be different? How should a relationship change to make it more satisfactory for our pupils, patients, or clients and for us? How should our practice situation be organized to provide all participants with worthwhile learning experiences? Debating what we really want is a part of the process of clarifying the issue, which becomes more and more important as the research progresses. In the course of problem analysis and data collection, our aims become more practical and realistic as we become better informed by knowledge of the situation. This *new understanding* that we gain from analysis of the situation is one of the most important sources of action strategies. Understanding an issue, by uncovering the network of interrelationships, does not only lead to a new awareness of the situation, but usually also offers a wealth of ideas about possible action.

Another important source for action plans is the actual process of *data collection*. Simply finding out the attitudes of our pupils, patients, or clients may be enough to suggest possible solutions. Indeed, interaction with others as we collect data—by interviewing, for example—may itself be an action that changes a situation.

Finally, ideas and suggestions for suitable action strategies may come from *external suggestions*, for example, from conversations with your

research group, critical friend, or colleagues; information about how other people have coped with similar situations; and ideas in books, articles, and the Internet. We have deliberately left this source to last because it is most useful, in our experience, when used in conjunction with other sources. No advice from an experienced colleague and no book can replace your analysis of the situation, an understanding of its complexities, and a clear view of what you are aiming for. That said, we cannot overestimate the importance of being able to talk about potential action strategies with others, such as your research group or critical friend. When combined with the knowledge from experienced colleagues and published sources, including case studies written by other practitioners, your understanding of the situation and possible action strategies can be broadened and modified. This is because such suggestions, instead of remaining discrete and separate, are integrated with your own conception of the situation.

Developing action strategies is a constructive and creative activity that is interwoven with the lived experience and way of being of action researchers (Feldman, 2002) and the specific situation in which he/she/they live(s) and work(s). As a result, there are many ways of going about it, all of which are greatly facilitated through collaboration with a research group or a critical friend. Here are some suggestions that we hope will facilitate your search for action strategies:

- Don't be content with just one idea. You need to have the opportunity to choose among several possible strategies. In some situations, this is particularly important: the more different strategies you think of, the greater the chance of unusual solutions coming to mind that may help you to escape from "vicious circles" and dead-end situations.
- Don't reject a possible action strategy too quickly just because some difficulty occurs to you. Don't worry too much about feasibility to start with. It is more important to consider the potential opportunities offered by an action strategy than to think about possible difficulties (all solutions are bound to raise difficulties). These ideas are for broadening your awareness. They provide new perspectives and possibilities for thinking of solutions by concentrating on your inner strengths and those of your group or critical friend, which increases confidence in the success of the action strategies.
- Don't forget to consider existing strengths. When we talk about "improving a situation" or "solving a problem" it is part of our culture to think in terms of errors and mistakes. However, there is another way of looking at it. We can often bring about improvement by emphasizing strengths and building on processes that are already operating in the system (see our discussion of the systemic approach in Chapter 4). It pays to reflect on questions such as: What are (my, our, the pupils', patients', clients', etc.) strengths in this situation and

how can I/we create the conditions to build on them? What processes are in operation that already tend toward an “improvement of the situation” and how can I/we strengthen them?

- Sometimes action strategies become obvious during the analysis of the situation, and sometimes we have to search for them. When the latter is the case a group is usually better than an individual. A group supplies a wide variety of ideas from the varied experiences of its members. In addition, collecting and discussing action strategies for a particular situation is often not only illuminating for the practitioner who is looking for ideas, but also enriches the insight of other members of the group into similar situations.

Various methods can be used to identify possible action strategies. Diagrams, produced as part of the process of analysis, may also be used to identify potential action strategies (see M4.9). As in the case quoted above, every element and every relationship in a diagram gives rise to questions: Can I/we intervene constructively here? Which action strategies could I/we use to bring about some positive development at *this* point on the diagram? Another possibility is that metaphors developed during data analysis may lead to new ideas for action strategies (see M6.6). Brainstorming (see M4.1 and below) is another alternative, useful for collecting many different ideas from a group of people.

M7.1 Brainstorming: identifying action strategies

Brainstorming in a group is a form of “reflecting through writing” (see Chapter 2). It begins by finding some time when you won’t be interrupted. Each group member takes a clean sheet of paper or a new page in his or her research notebook (you may prefer to use a computer or other device, but for this exercise we personally prefer to use paper). Then, jot down all the associations that come to your mind when you think of the question, “What can we do in situation x?” As in M4.1, it is important for each group member to “go with” his or her associations and not to reject any immediately as unrealistic or trivial. People then take turns reporting their ideas to the group, making sure that none is rejected immediately. Once all the ideas have been put out on the table, the group can turn to evaluating the quality of the ideas. While it may seem to be more efficient to have a set of quality criteria for the ideas before discussing them, a preexisting structure could lead to not considering some that might be fruitful if they are looked at more deeply. Also, as in M4.1, it is possible to do this brainstorming as an individual by asking “What can I do?” rather than “What can we do?”

How can I/we choose which action strategy to put into practice from the range of available alternatives?

In the process of analyzing a situation and searching for action strategies, a particular alternative sometimes becomes obvious. You feel that your understanding of the situation is changed and clarified through looking at it in this way, as if this course of action had become the obvious and natural thing to do. Usually, however, the path to deciding on a specific action strategy is not paved by such intuitive clarity. Then, you need to weigh alternatives carefully, judging their feasibility with respect to yourself and your practice, your group, your pupils, patients, or clients, and your aims for your situation.

M7.2 Cross-checking alternative action strategies

Deciding on an action strategy is a process that is tailored to the specific circumstances of a situation. It can be built into the brainstorming process using steps 4 and 5 of M4.1: the group follows an agreed-upon procedure to analyze, assess, and prioritize or rank the brainstormed strategies; and then two or three of these are selected as possible strategies.

Below we provide some guidelines that can be used either in a group or individually to select appropriate starting points:

1 Usefulness

- How useful is this action strategy?
- Will it solve the problem? For how long?
- Might there be any additional positive effects?
- Might there be any negative side effects?

These questions may be answered with the help of your data or simply from your or the group's knowledge of the situation. Sometimes, however, you will find you need additional information. This serves to show how many decisions in everyday life have to be taken on the basis of insufficient knowledge (because of sheer lack of time). But, bear in mind that it is impossible to foresee all eventualities before taking action, and that uncertainty, "mistakes," and unintended consequences are therefore unavoidable. Being aware of this can give you the confidence to face problems as they come, accepting them as an expected feature of life as a practitioner. In this way, you make problems accessible for development—instead of denying and repressing them. Again, working

collaboratively in a group or having a critical friend can lead to increased confidence for taking action.

2 Practicality

- How practical and feasible is this action strategy?
- What room for maneuver will there be when implementing this strategy?
- Will it require the goodwill, support, and cooperation of others?

Some ideas can appear to be very useful but are simply not feasible in this particular situation. They may take too much time. They may require the cooperation of other people (for example, colleagues, family members) who are not willing to give it. They may need financial resources, which are either unavailable or out of proportion to the expected usefulness of the idea. Or it may be that you do not have the necessary knowledge and expertise, or the opportunity to acquire them quickly enough, to make it worthwhile. In the light of the practicality criterion, those action strategies are preferable that give you most room for maneuver and are least dependent on other people and institutional structures.

3 Acceptability

- Will this action strategy be acceptable to the practitioner(s), pupil(s), patient(s), or client(s), and others concerned?

An idea may be useful and feasible but it may not fit your values, personality, and circumstances, that of your group, pupils, patients, or clients or that of your organization or profession. Personal or group ownership of an idea is more important than its quality by more objective criteria when it comes to many practice problems, but particularly those relating to interactions between people. Coping positively with problems of professional practice requires all participants to feel comfortable with the action strategy and be prepared to support its implementation. Generally, this is more likely to be the case if the chosen strategy gives them more room for maneuver and greater responsibility.

Group decision making for choosing among alternative action strategies

Much of what we have written about so far could be applied to either individuals or groups engaged in action research. For the most part we

have envisioned groups of action researchers as being practitioners who collaborate in helping each other engage in the action research process, but may be engaged in different projects. Of course, a group of practitioners could also work together to improve practice in the same situation (see, for example, Grundy, 1994, and Calhoun, 2002). When this is the case, decisions about what action strategies to employ should be group decisions. There are at least several different techniques that have been developed to help groups make decisions. One that we have included in the previous edition of this book and again here is the Nominal Group Technique (NGT). Others include group brainstorming, dialectical inquiry, devil's advocacy, and consensus making.

The decision-making processes that we review here can be used for special situations, including when:

- A group wants to decide on a starting point for group research, such as the study on looking after older patients by a group of nurses that we looked at in Chapter 4.
- A group wants to explore possibilities for clarification of the starting point for their collaborative research. For example, having identified lack of support for pupils with special needs as the focus for a collaborative project, a group could address the question: "What are the most important reasons for lack of support for pupils with special needs?"
- A group wants to think of a number of action strategies and select one or more for collaborative action. For example, they might address the question: "What actions and organizational changes would better prepare patients for their discharge from the hospital?"

For the most part the types of group decision-making processes that we will look at below are highly structured. This ensures that all members of the group voice their ideas. It prevents discussion from getting stuck on just a few aspects of an issue, helps to bring more ideas to light, and enables quicker decision making than many other procedures (for example, an unstructured group discussion). The analytic discourse (M4.6), while not a decision-making process per se, does have many of the characteristics that are needed for effective group decision making. Some of these were described by Delbecq (1967):

- 1 Group structure: A group is not simply a gathering of people. The members of a group have some type of relationship among themselves. In the analytic discourse, the group is usually practitioners who have gathered together to either inquire together or aid each other in their individual action research. The size of a group is also important. We have seen, for example, in the NGT process described below, the optimal group size is eight to ten people; with more, the whole exercise

becomes too cumbersome, and, with fewer, there is increasingly less need for such a procedure. If there are more people than this it is possible to have multiple groups, each engaging in the decision-making process. The separate groups could then each choose a representative who would be part of a “group of groups” that would engage in the decision-making process.

- 2 Group roles: An important aspect of group decision making is that the members of the group take on different roles. In the analytic discourse, as with most group decision-making processes, one member of the group serves as the facilitator or moderator. Other members are in the role of tellers or listeners and questioners (Feldman, 1996). Of course, as the group process continues, members can change their roles with changing circumstances. An important role is that of facilitator, or group leader. The leader’s task is to structure the information flow and promote the development of ideas by keeping the group to the NGT rules. However, he or she must not do this so strictly that group members lose their interest and enjoyment in participating. The following advice may be useful for group leaders:
 - Don’t reinterpret people’s ideas.
 - Use the participants’ wordings as much as possible.
 - Don’t develop ideas of your own—you are not a participant.
 - Don’t allow people to challenge or attack each other.
 - Give participants time to think.
 - Don’t offer interpretations or search for patterns.
- 3 In short, the group leader’s role is to ensure as much as possible that the process is as open as possible and democratic in nature.
- 4 Group process: There is a predetermined set of steps that the group uses to come to a decision. The analytic discourse has a particular structure that is described in M4.6. We describe some others below.
- 5 Group style: Groups are sociocultural entities. Therefore, the tone of interpersonal relationships, such as the amount of stress on individual members, the congeniality of the group, and perceived consequences, can affect how the group works together. The taking on of specific roles and the use of predetermined steps can help to smooth over differences and increase collegiality, as can be seen in the analytic discourse.
- 6 Group norms: For the decision-making process to be successful, the group needs to work under a set of norms that promotes openness, honesty, and a desire to reach a decision. This includes seeing “conflict and disagreement as being healthy and natural; ... the acceptance of individual freedom and group freedom to disagree; ... and acceptance of the necessity of partial agreement as an acceptable, legitimate, and realistic basis for decision-making” (Delbecq, 1967, pp. 337–338).

Problems and drawbacks with group decision making

- Some participants may react against the use of highly structured, formal rules. You can guard against this to some extent by explaining the reasons for them.
- The decision-making rules may change the dynamics of a group. Sometimes power struggles, suppressed early on, surface later.
- There is always the danger that minority views may be neglected. Steps should be taken to ensure that the result fairly represents the whole group, particularly if the group is intending to go on working together.
- The wording of the initial question is very important and can be difficult. If it is too narrow it may limit members' thinking. If it is too broad, there may be the problem that different members interpret it differently. When in doubt it is probably better to err toward breadth.
- The leader's role is quite demanding. It may be difficult to see that the rules are kept without spoiling participants' enjoyment by policing the procedure too tightly. Sometimes this can be a little daunting.

M7.3 Nominal group technique (NGT)

Nominal Group Technique (NGT) is a method that has been used extensively in the health field for 50 years (see, for example, Horton, 1980). As with other structured group decision-making processes, it is used to help ensure that all members of the group have the opportunity to voice their ideas. It prevents discussion from getting stuck on just a few aspects of an issue, helps to bring more ideas to light, and enables quicker decision making than unstructured discussions. NGT offers participants the chance to contribute their ideas, and makes visible the pros and cons among alternative action strategies.

Procedure

The NGT process contains the following phases:

**1 Explanation of NGT and its stages
(five to ten minutes)**

The objectives of the method and its stages are explained. With most groups it is useful to visually display them.

2 Clarification of the question (five to ten minutes)

The question to be considered by the group is announced. This needs to be decided in advance, by either the person whose problem

it is, the group leader, or a planning group of some kind. Group members are given a short time to clarify the issue. If appropriate, the question may be reformulated. Discussion at this stage should only deal with the wording of the question. Substantive comments come in the later stages and should be discouraged by the group leader at this point.

3 Individual listing (seven minutes)

Working individually, group members list short statements and phrases that come to mind in answer to the question. This should be done individually to ensure that members write down as many ideas as possible without being influenced by one another. Members should be encouraged to write specific, concrete statements rather than general ones.

4 Collection of statements (15–35 minutes)

Each member in turn is asked to read out just one of the statements he or she has listed. These are added to a group list on paper, whiteboard, or electronically using an abbreviated version using the original words as much as possible. During this stage members should not engage in evaluation, interpretation, or discussion of the statements. The collection of ideas continues to rotate around the group until all ideas are recorded so that they are visible to all group members. This highly structured procedure gives an equal voice to all the members, in a way that seldom or never happens in typical group discussions.

5 Clarification of statements (approx. 15–45 minutes)

At this stage there is an opportunity to eliminate repetitions and reword statements, provided the original author is in agreement. Comments, judgments, and evaluations should still be avoided at this stage. Because this phase makes visible what wealth of ideas there are in a group, provided there is enough time, we suggest that the group leader stimulate more ideas by asking questions (Why is it important? What would be your first step in order to get this idea going?).

6 Individual selection and ranking (seven minutes)

Members work individually to select the three to five statements that seem to them most relevant with respect to the initial question.

Then, they individually rank them in order of importance, numbering them from most to least important.

7 Collection of rankings (10–15 minutes)

The ranking points awarded by each member are tallied to identify the top six or so statements.

8 Discussion and interpretation of results (30 minutes)

In this final stage, the members discuss the results and their implications. The NGT process usually breaks a problem down into its constituent parts, with the result that the context and relationships between the parts may be lost. Therefore, it is important at this stage to recreate an understanding of the problem as a whole.

The following questions can help to direct discussion:

- Which statements do participants generally agree about in their rankings, and which create the greatest divergence of view?
- What are the reasons for agreement? Are the statements so general that everybody finds it easy to agree? Do they represent generally shared prejudices?
- What are the reasons for differences of view? Do they relate to different working conditions, different styles of work, or differences in attitudes or aims?
- Does the result suppress minority views (statements that are important to just a few people)? How does the group want to deal with that?
- Do the “winning statements” deserve the weight that has been attached to them by the NGT procedure?

Afterwards the group may move on to discuss what consequences should result from the exercise.

M7.4 Consensus making

In everyday English, consensus means a general agreement. However, as a decision-making process it is much more. The aim of consensus decision making is to come to a resolution through cooperation and collaboration. It is fundamentally democratic in nature because all group members have equal opportunity to participate in the process. The decisions that are reached are at least satisfactory to

all members, with everyone agreeing that there are no concerns that stand in the way of the outcome of the process.

One of us (Allan) taught for nine years in a Quaker school in Philadelphia. The School Committee of the Meeting conducted its business via consensus decision making, as did the faculty. Both groups used a similar process. When a decision needed to be made it was done by discussion of the issue or problem, with the goal of reaching consensus. However, reaching consensus did not mean coming to agreement; rather, it meant reaching a state in which no one felt strong enough to block consensus. It was understood that if any member of the School Committee or the faculty felt strongly enough about the issue, he or she could prevent the group from coming to agreement. However, to engage in this type of decision making, all members of the group have to respect one another's opinions, beliefs, and concerns, and to be able to acknowledge

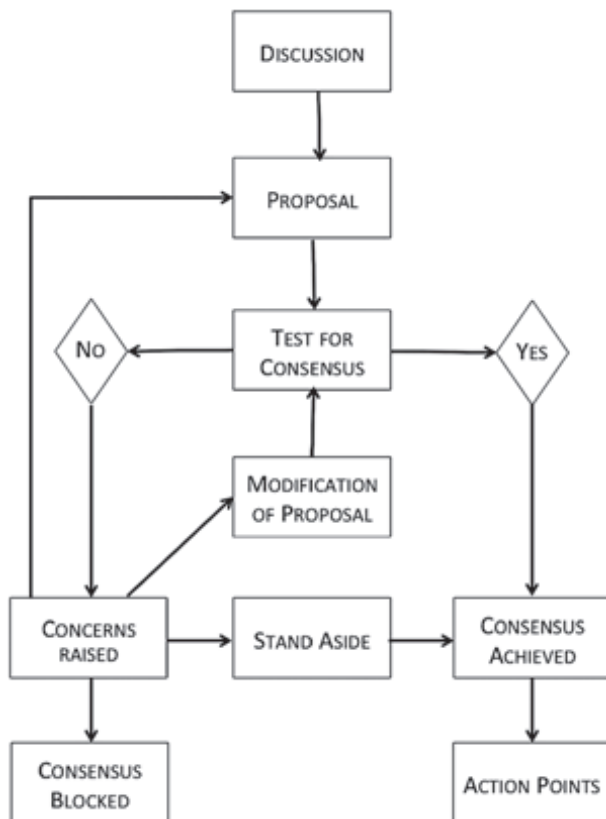


Figure 7.2 Consensus decision making (redrawn from Boundless, 2016).

that while he or she may have some misgivings about a plan or a decision, those beliefs would not be enough to prevent the group from making a decision. As with all types of group decision making, the Quaker style of consensus building requires a skilled facilitator. That person, often called the clerk, acts to make sure that all members have a voice in the discussion, and that minority opinions, which can lead to consensus being blocked, are aired and respected in a friendly manner.

All this being said, it does help to have some rules or guidelines to follow to reach consensus. For example, the group can decide that no one can speak twice until all members have been heard from. In this way, participation from everyone is encouraged, even those who usually are reluctant to speak or defer to those whose opinions are held to be more important. As we noted above, this process requires a facilitator who can make sure that the discussion progresses openly and respectfully. The facilitator also attempts to articulate the consensus that might be emerging, checking with the group members to see whether what he or she is hearing is where the conversation is heading. Figure 7.2 illustrates one way to engage in consensus decision making.

M7.5 Devil's advocacy and dialectical inquiry

The two group decision-making methods that we have looked at so far, NGT and consensus, seek agreement through cooperation. It is also possible to use adversarial methods, such as dialectical inquiry and devil's advocacy. While we favor the more cooperative methods, the adversarial ones can help prevent the problem of "groupthink." The term groupthink was first used by Janis (1972) to describe the situation that can occur in highly cohesive groups in which a strong desire to come to agreement becomes more important than the consideration of possible alternatives. The problem of groupthink can be minimized by a group leader who makes sure that all participants have a voice in discussions, and by making the process as open and democratic as possible.

The problem of groupthink can also be minimized through the use of adversarial group decision-making processes that artificially disrupt the cohesiveness of the group. This is done in devil's advocacy by nominating group members to have the responsibility of finding problems or faults with the proposed solutions. If the devil's advocates find little or no fault with the proposed plans or solutions, then the group can decide to go forward with them. If fault is found, then the plans may be modified or discarded (Lunenburg, 2012).

A second type of adversarial decision making is dialectical inquiry. In this method, the larger group is divided into two or more smaller groups, each of which takes divergent views of the situation and of possible actions. The groups meet separately to uncover the assumptions behind their position and to rate them on their strengths and feasibility to implement. The groups then engage in a debate to defend their own position and to find faults in the others' positions. Careful notes are kept of the debates to identify whether agreement can be reached among the positions or whether further research is needed.

Planning concrete steps to enact my/our action strategy

Earlier in this chapter we gave the example of a teacher deciding "to take a deep breath" as an action strategy to be used at certain points in her teaching. What concrete form might this strategy take in the classroom?

- Whenever the teacher feels that the students are having difficulties in understanding, and she is in danger of producing a rushed explanation, she could give herself a mental order to "stop." This pause "to take a breath" would give her a chance to decide whether any reaction was necessary and, if so, what kind of reaction would be appropriate. The disadvantage is that it may not be easy to keep cool and pause for reflection in the stress of the situation.
- Alternatively, the teacher could announce that she is going to pause to think, and justify this to her pupils. The disadvantage mentioned above might also apply in this case, and there is the additional problem that some teaching time will be lost.
- Another possibility would be for the teacher to ask a question (or "bounce back" a pupil's question) to keep the pupils thinking while giving her time to think. Here, the drawbacks are that the students are deceived about the teacher's real intentions while she still cannot concentrate her full attention on thinking.
- Yet again, the teacher could interrupt the flow of work and explain what she sees as a problem: "I don't think you have understood everything. Perhaps I'm not being clear. Is that true?" A disadvantage of this strategy may be that the pressure to react precipitately will rise if more students say they have not understood. Also, it is often difficult and time-consuming to decide on a solution in collaboration with a large group of pupils.

This example makes it obvious that it is necessary to plan concrete steps to put an action strategy into practice, taking into account the advantages and disadvantages of different alternatives.

In order to put an action strategy into practice it is necessary to feel comfortable with the idea and have confidence that it can be carried out. Does this action strategy suit my/our way of working? Can I/we do that? Are these actions part of my/our repertoire? If not, could I/we develop the necessary competences? Here are some possible ways of developing confidence in action strategies:

- Imagine the situation and play it through in your mind. Mental training, similar to that used by athletes to prepare themselves for specific movements, is useful preparation for simple, relatively isolated actions. It is more difficult to use this method for complex sequences of interactions, although it can alert you to possibilities and consequences that you have not thought of before.
- Try out the action strategy in advance by piloting it with one or two people or a different group. This is good advice for any new activity in practice, but especially makes sense when you use the action strategy to test practical theories.
- If a colleague is already using this action strategy, try to arrange the opportunity to observe it in action and talk it over with him or her afterwards. In cases where you cannot directly observe your colleague in action, it still helps to discuss it. This will help you to develop a clearer awareness of the possibilities and limitations.
- Try to arrange an opportunity to become more familiar with certain action strategies within a training program, for example, setting up a short course or working group.

As a rule, it is not possible to feel completely comfortable with an action strategy until you have put it into practice. It is easier to try out something new if you normally have an experimental attitude to your practice. Putting an action strategy into practice is a “test” and we can’t expect everything to work out well immediately. However, we can expect to learn something that will add to our professional development.

How can I/we check the results of action strategies and record the experiences I/we have gained?

The most important and most interesting tests of an action strategy do not lie in cross-checking with yourself (as in M7.2) or in any procedures for group decision making (as in M7.3, M7.4, or M7.5) but in putting it into practice. In order to learn as much as possible from trying it out, it is important to consider in advance what data to collect and for what purpose. In general terms, all the methods of data collection and analysis that we have already described are suitable. A *time plan* may help you to think through and prepare the complex task of coordinating research activities with different action strategies.

M7.6 Planning your action research

In Chapter 5, we provided some suggestions for developing a data collection plan (M5.2). As we have suggested in this chapter, data can be used to test action strategies as well as gain knowledge and understanding about a practice situation. Clearly, if you are trying to do the former, it is important to have a good idea about what types of data you would collect and how before you put the action strategy that you would like to test into practice. As an example of this, we will look at the plan developed by Amy Schecter who engaged in action research as part of a course that she took while doing her doctoral work. At that time, Ms. Schecter was the “subject area leader” (SAL) at a middle school. Much of her work in this role was to manage the English Language Arts department. She felt that she had successfully routinized that work and was interested in using her role to coach the other teachers to help them improve their teaching and their students’ learning. As a result of engaging in some of the Ms from this book, she came up with the following research questions, which she used to develop her plan:

- How do teachers communicate lesson objectives to students?
- In what ways do teachers plan to assess their lesson objectives?
- How do teachers reflect on their practice?
- What do teachers perceive to be effective coaching practices?

She described her plan in this way:

From these questions, I began to ask myself what I needed to know and what data I needed to gather in order to find answers. In the first two research questions, I will utilize my field notes in combination with the teachers’ reflections on the lesson to try and gain a clear picture of what teachers perceive about communicating lesson objectives and planning for assessment. I will utilize the post-observation conference recordings, as well as teacher interviews to describe how teachers reflect on their practices. Finally, I will use my researcher journal and teacher interviews to determine what teachers perceive to be effective coaching practices.

(Schecter, 2012, p. 2)

Ms. Schecter also developed the data collection matrix shown in Figure 7.3. In the matrix, she shows the types of data that she planned to collect for each of her research questions.

Research Question	Types of Data I Will Collect	
Current level of teacher's reflection	Post-Observation Conference Recordings	Teacher Interviews
Lesson Alignment to goals	Field Notes	Post-Observation Conference Recording
Goal alignment with lesson assessment	Field Notes	Post-Observation Conference Recording
Effective coaching practices	Post-Observation Conference Recordings	Teacher Interviews/Researcher Journal

Figure 7.3 Ms. Schecter's data collection plan.

One change that we would make to her matrix is the addition of a fourth column that would indicate the dates during which she would be collecting the data.

M7.7 The “organic to-do list”

A simple way to incorporate action strategies into your practice is to develop an “organic to-do list.” A to-do list is a list of things that you want to remember to do or accomplish. Traditionally it would be in the form of a list written on paper, possibly made fresh every day. As an item was accomplished, it was crossed off. Recently with the availability of calendars and planning apps in every type of digital device it has become possible to construct what we call “organic to-do lists.” An organic to-do list can be sorted into categories that correspond to the different varieties of activities that we do in our complex lives: tasks for our everyday lives, whether they are shopping, doctor appointments, or family responsibilities; or tasks that relate to our professional practice that could include preparing lessons, grading papers, preparing reports, and so on. It is possible to subdivide these categories further and get to the point where one of the categories relates specifically to our action research and our action strategies. It is also possible to give these categories a

priority so that different tasks or actions are ranked as first priority, second, and so on. It is even possible to attach “alarms” to them so that you are reminded to do them. What makes this type of digital list “organic” is that there is no need to rewrite the list every day. It is also possible to write memos and even attach photos that record what you did and what immediate effects you observed.

Unexpected results from action strategies

If action strategies do not bring about the expected results there may be several reasons:

- You may not have been sufficiently comfortable with the action strategy and may have carried it out in a diffident manner or in a different way from what had been planned.
- You may not have allowed enough time for the action strategy to make an impact, or you may have misjudged how much preparation the pupils, patients, or clients would need before the new approach was implemented.
- You may not have engaged sufficiently in a “reflective conversation with the situation;” or you may have not adequately considered alternative interpretations, or you jumped to premature conclusions.
- You may not have collected or examined appropriately data that would have helped you to better understand the situation.
- Perhaps the problem you investigated was not the “real” problem, or possibly more likely, the problem, your aims, or the context may have changed in the meantime.

The list above suggests that it is necessarily a difficulty if the action strategies do not result in the expected results. Unexpected results could be positive as well as negative. In order to understand how or why your or your group’s actions had its effects, it is necessary to conceptualize what constitutes success when you make changes in practice. For example, you could say that an action strategy is successful if it:

- 1 has resulted in the intended “improvement of the situation,” in such a way;
- 2 that it has not also caused unintended, negative side effects that detracted from the main positive effects; and
- 3 if the “improvement” is not “short term” (vanishing after only a short time).

If it turns out that the results of our action strategies are not what we expected, we also need to acknowledge that what are considered

improvements in practice can vary among the objectives and the values that guide our actions and that of our pupils, patients, and clients, and other stakeholders. For example:

- Your aims and values may change in the course of the research. You may begin by stating an interest explicitly that recedes into the background in the course of the research, because values that you had neglected become more important.
- Your aims and values, which are the basis for regarding something as an improvement or progress, may be more or less explicitly stated. The less explicitly they are stated, the less clear it is that there has been actual improvement. On the other hand, highly explicit aims and values can unduly restrict your research and your actions.

In the list above as well as previously in this book, we used the term “values” without making explicit what we mean by it. The Oxford Dictionaries defines values as “A person’s principles or standards of behavior; one’s judgment of what is important in life” (Oxford Dictionaries, 2016). Clearly, not everyone shares the same values and often they conflict with one another (Berlin, 2013). When we are in situations in which we are working or collaborating with others we sometimes assume that we all share the same values, or refrain from discussing them as a way to avoid possible conflict. Therefore, while explicitly stated aims and values may have the effect of restricting certain aspects of your research and actions, not discussing them among peers, pupils, patients, clients, or other stakeholders could have larger negative ramifications. Of course, this type of discussion should also be part of the ethical process of action research, as well as your attempts to move toward the democratic sharing of the outcomes of your research.

- Some improvements are in terms of processes, while others are products. The outcome of your action research could be a new way of doing something or even a new way of thinking about your practice. This could result in changes in your practice situation without directly observed products. For example, an action research study could convince a nurse that he or she should provide patients with as much information as possible about their conditions and possible treatments. This could cause a significant change in the practice situation without necessarily improving anyone’s health. On the other hand, if the goal of the action research is more end-product-oriented, such as pupils performing better in exams, patients who better take care of their own health, or clients who are less depressed, then one should expect to see some evidence of these products.
- Some improvements refer primarily to your emotional well-being or that of your pupils, patients, or clients; some refer to performance; and some to new or deeper insights.

Many of these improvements are subtle in character rather than spectacular. In our experience, improvements in practice often appear rather inconspicuous on superficial examination: practitioners and/or their pupils, patients, and clients feel a little better and/or perform a little better than previously. However, in the long term, this “little” can make a difference.

What is considered to be an improvement depends also on *who* is making the judgment. What appears to be an improvement to a practitioner may not be regarded as such by a pupil, patient, client, or other stakeholders. What any one of the participants or stakeholders welcomes may not conform to the values of the others (for example, different community interest groups) or to the values of the state as embodied in laws and regulations. We want to distinguish four perspectives to show clearly the multiplicity of criteria that action researchers should use to evaluate improvements.

1 The perspective of the individual practitioner

Much of the orientation toward action research that we present in this book exemplifies this perspective. Practitioners try to improve a situation; in doing so, their personal values are uppermost in defining what may be considered as improvement. In addition to the individual interests of action researchers in changing unsatisfactory situations, there is also a collective, societal benefit in practitioners taking responsibility for the development of their own practice.

2 The perspective of other people concerned

Action research assumes that effective development of social practice is only possible with the collaboration of all those concerned in this practice. There are both ethical and epistemological reasons for this. For ethical reasons, action researchers need to collaborate with others in a negotiated evaluation of the situation. Epistemological considerations lead to including all the other people concerned because the knowledge developed through action frequently depends on their willingness to cooperate (see Chapter 5). In addition, there are both epistemological and ethical reasons to democratically share the knowledge and understanding produced through action research (Fals Borda & Rahman, 1991).

That said, we cannot definitively and finally identify in advance who are the concerned persons. Certainly, all the participants in the situation that is being researched, and all those who will be affected in any way by the action strategies being implemented, should be included: in most cases, this means the pupils, patients, or clients. The participation of other people concerned, such as family members or colleagues, is sometimes uncovered in the course of the research. For example, in an interview with

a patient, another care giver is mentioned and he or she then becomes a “person concerned.” Of course, the ethical code should apply to all those concerned in the situation in even an indirect way, but another important consideration is that, in the long term, successful action strategies will depend on tapping into their knowledge and expertise, and their willingness to participate in the action strategies.

3 The professional perspective

A characteristic of professionalism is that the practice of an individual member of the profession should be open to scrutiny by professional colleagues. Evaluating practice is not only a matter for action researchers and those directly or indirectly concerned, but in some sense concerns all practitioners as a professional group. This professional evaluation begins when teachers, nurses, social workers, or other professionals voice their knowledge, experience, and professional values in conversations about their practice situations. If such conversations go beyond the narrow circle of close colleagues, they contribute in the long term to a shared stock of knowledge and values that connects practitioners as members of a professional community and distinguishes them from other groups.

This perspective is evident in the particular responsibility the profession has to society. This professional responsibility requires both specific expertise and a professional ethic—a reflexive understanding of educational aims, willingness to undertake what society expects of the profession in an autonomous way, and willingness to be accountable for the freedom necessary to carry out these responsibilities. (For more about responsibility in action research, see Feldman, 2007). The development of such a professional community depends upon both external solidarity and continuous internal critique of professional action, knowledge, and values. As a result, the tenets of the profession can be communicated to the public in good conscience.

4 The perspective of the community

Practitioners’ action research also has an effect on the community as a whole, which also affects the action researcher. Some of this is due to the fact that many practitioners are employed either directly by the community (as in the case of most teachers) or indirectly through the use of public funds (as is the case for many nurses and social workers). It is also due to the fact that practice situations do not exist separately from the rest of the social sphere—they are embedded in the world of the communities in which they are situated.

What counts as “improvement” is ultimately the result of a sometimes implicit process of moving among these perspectives, each of which can claim some legitimacy. However, we think that:

- The complexity of professional practice necessitates freedom of action, which, in turn, requires a high degree of professional knowledge, self-critique, and responsibility;
- There is a need for a high level of professional debate that takes into account both the interests of the pupils, patients, and clients and the interests of society more generally; and
- This dynamic process of self-reflection and continuous development must be embedded in a professional community and promoted by it.

Community interest groups and state institutions should both challenge and support this process, but they should not replace it with a multitude of restrictions or regulations. Such regulations can certainly solve some problems in the short term. In the long term, however, they will prevent schools and other institutions from becoming capable of coping with society's developing needs in a creative and constructive way. It is also important that these institutions not require that teachers participate in state-sponsored communities of practice, such as the "professional development communities" that are common in schools in the US (see our discussion of PLCs in Chapter 3). When teachers and other practitioners are required to join these "communities" it is often in addition to what they are already expected to do as part of their practice. This can result in resentment and the accompanying resistance to participation. Overall, this can have a strong negative effect on practitioners' attitudes toward the usefulness of and benefits that they could receive from participating in a community of practice that serves their needs (Cochran-Smith & Lytle, 2009; Wenger, 1998, 2006).

Decisions about what counts as improvement, success, or failure are judgments about complex situations that are shaped in a multifaceted, social process. Not least for this reason, it is seldom possible to speak of success or failure in a strict sense. Only a more cursory inspection will suggest successes without any negative side effects, or failures without any positive side effects. This should be a source of confidence to us all in continuing to research and develop our professional situations (even if progress seems small), accepting discrepancies and "problems" as natural characteristics of complex professional work. It should also remind us to be cautious and skeptical about claims of large-scale improvements.

Action research is an "art of the possible," which does not aim for a predefined ideal state, but helps us to see the potential that is implicit in a situation. It also helps us to identify and to put into practice action strategies that correspond more to our present values. To this end, its cyclical character is most important. The test of action strategies leads to everyday practical action, to new starting points for reflection, and, thus, in some cases, to new research cycles. To explore a new starting point, resulting

from the implementation of action strategies, the ideas in Chapter 4 are relevant. This new starting point will often include novel questions, which have only emerged because “improvements” resulting from prior research have raised the level of aspiration, making it possible to see further potential for innovation and, thus, leading to a further spiral of professional development.

Making practitioners' knowledge public

For Lawrence Stenhouse (1981, 1983), research was systematic inquiry made public.¹ In this chapter, we look at how action research is made public. We begin by explaining why, in our view, “going public” is an important part of action research. We will then discuss different ways of reporting your own research, and possible audiences, and follow that by giving some advice on the most common form of presentation, that is, the written report. We end this chapter by discussing the idea of knowledge democracy and its relation to action research (in 't Veld, 2010; Rowell & Hong, 2017). In the next chapter, we will present some examples of action research reports that have been published so that you can look at the decisions others have made and compare them with both our suggestions in this chapter and your own ideas.

Before we begin, we want to make clear that there are many ways to make your action research public. Traditionally we think of publishing articles and books but practitioners can also make their research public orally by reports in staff meetings, presentations for colleagues at professional meetings, and workshops. While oral presentations do not provide a permanent record of your work, they are a way to make it public. Of course, the Internet is also an important means of disseminating your work. However, it is important to remember that anything published on the Web should meet the same ethical and copyright requirements as any other publication.

Why is it important to make practitioners' knowledge public?

While the knowledge that social scientists and scholars construct is an important source of information, the books and articles they write usually have little connection with the world of the practitioner. In some fields of professional practice, there is a tradition of the reporting of clinical studies written by people working in the field. Often professional

associations publish these clinical studies. In nursing, clinical studies are published in journals such as the *Journal of Research in Nursing*, the *International Journal of Nursing Studies*, and *Nursing Times*. In the teaching profession, professional bodies such as the Classroom Action Research Network (www.did.stu.mmu.ac.uk/carn/) and journals like *Educational Action Research*, *Action Research*, *International Journal for Lesson and Learning Studies*, and *Studying Teacher Education* regularly publish writing by practitioners. Teachers' action research can be an important catalyst to change the impression that teachers can only be consumers rather than producers of the knowledge of practice; unfortunately we still see too often teachers being "in-serviced" by outside "experts." We believe that because action research can produce the type of knowledge that leads to the enrichment and improvement of practice, it is imperative to make this knowledge public.

We now turn to some specific outcomes of making practitioner knowledge public. We organize them according to a scheme developed by Susan Noffke (1997): the professional, the personal, and the political. Professional reasons for engaging in action research include adding to the knowledge base for teaching, staff development, and the development of the profession associated with the practice. Personal reasons include developing one's capacity for reflection and increasing self-confidence. Finally, action research can be done for political reasons, including critiquing the nature of professional practice, influencing policy, and making the production and use of knowledge more democratic. Below we give some examples of the types of outcomes related to each of these reasons for engaging in action research.

Making practitioner knowledge public for professional reasons

Keeping professional knowledge from being forgotten

Much of the professional knowledge that practitioners produce by engaging in reflective practice stays with them. As a result, this knowledge rarely accumulates to move the field forward. Action research aims to rectify this by giving practitioners practical methods to develop knowledge from their experience and make a contribution to the shared knowledge of the profession. Reporting is an important final step in realizing this aim. It saves knowledge and insights from being forgotten in two senses of the word: when action researchers report and communicate their experiences they root it more deeply within their own memories, and by making it available to other teachers, nurses, and social workers and their professional community as a whole, it becomes part of the collective memory of the professions.

Playing a more active role in education in the profession

In teacher education, and to a lesser degree the education of other professionals, there is a separation between the theoretical and practical parts of learning to be a full-fledged member of the profession. Much of the former occurs in colleges or universities, while the latter happens in schools or other practice settings. This separation is also seen in who does the teaching of the novices in the two settings: professors in the university and mentors in the field. The mentors who are involved in the training and induction of new practitioners need to have a range and depth of practical experience, and be able to explain professional practice and draw meaning from it when working with novices. They need to open their knowledge and their practice to critical questioning and be ready to change on the basis of experience. Last but not least, they need to be open to differences in novices' ideas and practice (which could imply criticism of their own practice) and use critical questioning as the basis for their own and the novices' reflection on their practice—becoming a sensitive partner and adviser in their education. In short, they need to be “reflective practitioners,” able to communicate their practical theories and knowledge to their (future) professional colleagues (Schön, 1983). However, the same is true for those who teach novice practitioners in the universities. This suggests that university professors and expert practitioners ought to be engaged in action research, collaborating with one another to improve professional practice in their educational situations, and, in addition, they ought to be making their new knowledge about professional education public so that it can have a positive effect on the field as a whole.

Professional accountability

Professional standing depends to a large extent upon the cooperation of pupils, patients, or clients and, to some extent, their families; and the support of administrators, policy makers, or inspectors, and so on. Practitioners cannot afford not to care about the impression they make on others. Most of what they do, particularly anything innovative, relies on the cooperation of those concerned. This, in turn, depends upon their understanding and knowledge of the action researcher's aims. Communicating the outcomes of action research to those concerned has a twofold effect:

- It shows the practitioner's commitment to those concerned (for example, clients and their families) as partners in a common endeavor, and places a responsibility on them that is likely to strengthen their cooperation.
- It disseminates knowledge about practice and the conditions of the practice situation and, in this way, empowers those concerned to make a constructive contribution of their own.

Making practitioner knowledge public for personal reasons

Increasing the quality of reflection on practice

Preparing to report on the experiences and outcomes of action research involves reflection and analysis in addition to what is needed to develop and evaluate action strategies. As a result, it sharpens initial interpretations, and gives rise to additional insights. Reporting the outcomes of action research is also a prerequisite for getting feedback and critique. It makes it possible to receive comments and at the same time demonstrate the willingness to think more deeply about one's practice. It is also true to say that the publication of results is considered to be an essential part of the quality control procedures for more traditional forms of research. That is, an important method for ensuring validity is to make your research available for critique by your peers. Even when the reporting is done orally, for example, to colleagues, it can lead to further theorizing upon practice. It is as true here as in any other situation that one of the best ways of learning is by having to present and explain it to others.

Increasing professional self-confidence

After a number of years in the job many practitioners feel that their professional development has come to a standstill, and that their work has become routinized and they themselves isolated. For example, when we used the Nominal Group Technique (NGT) (see M7.3) to find out what teachers find most detrimental professionally, a sense of lack of cooperation from colleagues came out on top. Reporting on research can help to overcome this problem because it documents individual professional development and makes it visible. In the long term, research knowledge developed by individual practitioners can build up a collective knowledge base upon which individual members of the profession can draw, and that forms a bond between them (Elliott, 2007). We think that such a knowledge base, primarily produced by teachers, nurses, social workers, and other practitioners, is an indispensable prerequisite to strengthening the collective self-confidence of practitioners and overcoming the damaging effects of the sense of isolation that many have.

Increasing professional autonomy

In recent years, there has been an increase in the rules and regulations that define and structure practitioners' work. This limits the amount of autonomy that practitioners have as professional decision makers. We believe that one way that practitioners can act against this is to contribute to the professional and public discussion and credibly show professional

competence. In doing so, they pave the way to increasing their professional autonomy. If they demonstrate that they are willing to study and evaluate the quality of their own work and draw consequences from new understandings, trust can develop and it can be shown that a reduction of professional autonomy based on lack of confidence is unnecessary and even counterproductive.

Improving the reputation of the profession

Many practitioners in the caring professions (for example, teachers, nurses, and social workers) are aware of having a low status in society and find themselves subjected to adverse public opinion. They may feel powerless victims of the media. We believe that there is a relationship between low self-esteem and low profile in public debate on professional matters. As a result, practitioners receive very little feedback on their contribution to the formation of public consciousness. For example, teachers passively accept scandals in the media and the complaints of dissatisfied parents, because they have no voice in public and educational debates. We believe that by contributing to building up a professional knowledge base, and participating in public debate, teachers and other practitioners can raise the self-esteem and status of their profession.

Making practitioner knowledge public for political reasons

Influencing policy

In analyzing data from your own experiences and reporting them, you make it clearer to others where you stand and why. We do not want to overestimate the importance of rational arguments in public debate but we believe that teachers and other practitioners could strengthen their ability to shape policy and improve conditions in their institutions and workplaces if their voices were more often heard presenting well-argued reports on professional matters. Practitioners need to show that they are not only passive recipients of demands from other institutions in society but that they are also willing and able to express and realize their views of the society they want to live in, and that they deserve and demand respect as partners in the solution of problems in society.

Engaging in knowledge democracy

In recent years, there has been a push in many fields for what is called "evidence-based practice (EBP)" (Anderson, 2006; Davies, 1999; LoBiondo-Wood & Haber, 2014; McKibbin, 1998). The idea of EBP is that researchers determine through carefully structured, rigorous studies which practices

in a given field “work,” that is, produce the desired results in the pupils, clients, or patients. Practitioners then access that knowledge and implement it in their practice. This is laid out very clearly in one of the earlier articles about EBP in education (Davies, 1999). Davies distinguishes between using and establishing evidence. Educationalists, which is the term that he uses for teachers and instructors, make use of already established evidence. This is done by identifying a question about education, knowing how and where to search for the evidence on the Internet or in print, retrieving that evidence, and then determining its relevance and usefulness to the practitioner’s needs and environment. He contrasts this with those who establish evidence by being “able to plan, carry out, and publish studies that meet the highest standards of scientific research and evaluation, incorporating the methods of the social sciences, the natural sciences, and the humanistic and interpretive disciplines” (p. 109). Davies continues by stating that the objective of evidence-based education is “to ensure that future research on education meets the criteria of scientific validity, high-quality, and practical relevance that is sometimes lacking in existing evidence on educational activities, processes, and outcomes” (p. 110).

Clearly, what Davies is calling for is the antithesis of action research. It is the systematic devaluing of practitioner knowledge in favor of that of experts whose primary function is to put a stamp of approval on a set of practices that have “scientific validity.” There have been a number of critiques of this approach in education, including that it is based on a false analogy between the practice of medicine and education; the narrow interpretation of what counts as research; its top down, managerial agenda; and the focus on only those outcomes that can be measured (Biesta, 2007). In his essay, Biesta argues that he is:

particularly concerned about the tension between scientific and democratic control over educational practice and educational research. On the research side, evidence-based education seems to favor a technocratic model in which it is assumed that the only relevant research questions are questions about the effectiveness of educational means and techniques, forgetting, among other things, that what counts as “effective” crucially depends on judgments about what is educationally desirable. On the practice side, evidence-based education seems to limit severely the opportunities for educational practitioners to make such judgments in a way that is sensitive to and relevant for their own contextualized settings. The focus on “what works” makes it difficult if not impossible to ask the questions of what it should work for and who should have a say in determining the latter.

(p. 5)

We believe that when practitioners engage in research activities and make their knowledge public, it acts against the anti-democratic aspects that are

inherent in the EBP approach, which ultimately improves practice and its effects on pupils, patients, and clients (Rowell & Hong, 2017). We also want to make clear that the argument against the focus on EBP is not an argument against the use of data in action research. Rather, it is an argument against limiting what counts as evidence to highly constrained conceptions of what educational research ought to be. For a further discussion of our position on this, please see the section on quality criteria in action research in Chapter 6.

Disseminating practitioners' knowledge: to whom, what, and how?

If we have convinced you that it is important to make your knowledge public, you still have to decide how this should be done. When choosing the method of reporting it is helpful to ask yourself three interrelated questions:

- To whom—Who is your audience?
- What—What do you want to say to your audience?
- How—What method of reporting do you want to use, and what should you include (descriptions, research methods, analysis of findings, action strategies, etc.)?

Possible audiences for action research

Often practitioners underestimate both the degree of likely interest in their research and the size of their potential audience. In courses with an action research focus, we sometimes use the following exercise to clarify this point.

M8.1 Potential audiences for action research reports

You have been studying your professional practice for some time; have collected some data, analyzed them, and come up with some insights; and have implemented and tested your action strategies.

- 1 Make a list of whom you believe might be interested in this work.
- 2 Please compare what you have written with the list below, which was drawn up by participants in an action research course. Which potential audiences did you leave out? Was this because of the content of your research, the plans you have already made for reporting your research, or did some of these audiences simply slip your mind? Did you have a tendency to forget particular

kinds of audiences, for example, people external to your practice situation or your pupils, patients, or clients? Are these “forgotten audiences” really irrelevant or are you simply unused to addressing them? Are they particular to your practice field? Or were they left out because of the ever-changing nature of professional practice?

Possible audiences for action research reports

A list drawn up by participants in an action research course: Myself; my colleagues in my own institution; professionals in other institutions or groups in my region; participants in professional development courses; my pupils, patients, or clients; their families; administrators; policy makers; researchers; the media; the local community.

- 3 For each of the potential audiences for your action research, decide what purpose (professional, personal, or political) it is best suited to. You may also want to look at the examples above of different reasons for engaging in action research as a way to fine-tune your reasons.

Deciding on what you want to say

Much of what we have already discussed in this book can help you to answer the question of “What?” The *what* depends on your starting point for research, the way that you have investigated your practice, and the types of action strategies that you have implemented and the results of your evaluation of them. It also depends on your reasons for engaging in action research. What you report will be different if you are doing action research for professional, personal, or political purposes. It also depends on who your audience is. For that reason, answering these questions is not really a linear process—the who, what, and how all affect one another.

Methods of reporting

Sometimes the same research results would interest several different audiences, but different methods of reporting would be needed. For instance, you could report to the local community by writing a short article for your local newspaper or a letter to the editor. For a colleague, this kind of article or letter would be too short and provide too little information. The type of information provided would also depend on the audience—a report for other practitioners would most likely have different information and be structured differently than one for administrators or policy makers.

One of the ways in which reporting can differ is whether it looks more like a scientific paper or relies more on artistic forms of representation. For example, Eisner (1981) distinguished between scientific and artistic approaches to qualitative research by providing readers with a list of differences. First in his list are the forms of representation employed. Eisner argues that scientific forms of representation rely on literal, formal statements, and follow a fairly standard structure consisting of the presentation of the problems or research questions, a review of the appropriate literature, methods, data and data analysis, and ending with findings and implications. In contrast, artistic modes of representation “place a premium on the idiosyncratic use of form—visual and auditory form as well as discursive form—to convey in non-literal as well as literal ways the meanings the investigator wishes to express” (p. 6). We believe that both types of forms of representation have their place in action research. We also believe that it is possible to combine and meld them so that the strengths of both types of representation are present in the reporting. This may be especially important when trying to reach non-academic audiences.

In the next section, we look at different methods that can be used for reporting the results of action research. However, before doing so, we need to stress the importance of including your critical friend, members of your research group, or other collaborative partners in the reporting process. Depending on their role in the action research study, it may be appropriate for them to be co-authors or be given the opportunity to read, review, and edit the report.

If you are representing in some ways the thoughts, feelings, or beliefs of others, you may want to do what is called a *member check* (Birt, Scott, Cavers, Campbell, & Walter, 2016). In academic research, member checking is usually done by providing research participants with data and/or the results of data analysis to check for accuracy or how well it resonates with their experience. There are a number of different ways that this can be done, including providing participants with transcripts of interviews, or doing interviews or focus groups with participants to discuss the results of data analysis. These methods may be too time-intensive for many action researchers. Instead, you could have informal conversations with pupils, clients, patients, or other stakeholders to check your interpretation of what you learned and the results of your actions.

Reporting action research

As we noted above, action research reports can be broadly divided into two types—scientific and artistic. They can also be divided other ways—written (text-based) and non-verbal presentations, and the mode of delivery, such as printed page, oral presentation, and the Internet. In the previous edition of this book, we separated out the Internet as one way of

reporting action research. Given the rapid advances that have occurred in how information can be accessed on the Web, all the types of representation that we discuss below could be distributed on the Internet. That said, we begin by looking at examples of action research reports that are not primarily written documents.

Arts-based forms of reporting

There are as many ways to use the arts to report action research as there are arts (Wilson & Flicker, 2014). As a way to illustrate this we present some examples that were reported on in the journal *Educational Action Research*.

Art installations

To Townsend and Thomson (2015, p. 39), an art installation is a work of art that the viewer physically enters and animates. It “generally aims to elicit a direct embodied response from a viewer who is immersed in it as an experience.” In their article, they describe the use of an art installation that was part of a UK program to bring provocative arts to schools. They partnered with five artists to develop an installation about the use of water. The purposes of the installation were to educate youth, facilitate the reconnaissance stage of action research, and report on the outcomes of their project. A second example is from Percy-Smith and Carney (2011). They report on the use of a public art installation to engage the community, in particular children and young people, and to question assumptions and articulate new visions of and for their urban environment. The location of the art installation was the town center of Corby, England. Percy-Smith and Carney describe it as having the familiar variety of shops and architecture found in other urban shopping districts,

but there is a drab, rundown feel to this town centre space. A decaying physical environment, pound shops full of cheap purchases and a solemn haphazard procession to and fro of faces that appear far from nourished by this environment.

(p. 23)

Corby has a higher than average unemployment rate due to the decline of the steel industry. However, it became the focus of a large-scale redevelopment project. As a way to spark creative ideas about how the project could reinvigorate urban life in Corby, an art installation called Changing Spaces was developed by an artist with the help of children aged four to ten years:

The project used art installations to transform a town centre space in Corby in ways that would help people to re-imagine the space, raise questions about the purpose and form of town centre spaces,

question their own assumptions about how these spaces might be designed and provide a different basis from which to share their views and ideas about how the space might be developed ... art installations were developed using the theme of the nearby ancient woodland—Rockingham forest—remnants of which are visible in and around Corby.

(p. 27)

The children were an integral part of Changing Spaces because it focused particularly on how the role of children and the notion of playfulness could help in imagining livable urban space.

Performance

Action research can incorporate and be reported on through performance. For example, Sánchez Ares (2015) worked with a group of immigrant Latinas to explore and delve into their experiences of discrimination and resistance through the use of community-based theater. In another example, Carless and Douglas (2010) used arts-informed performance ethnography with sport and health science, physiotherapy, and occupational therapy students at two universities in the UK. The performance consisted of a series of stories, songs, and poems that helped them to gain insight into older women's lives, and led them to reflect on their new knowledge in relation to their own lives.

Film and photography

In their article, Lévesque et al. (2015) examine how the production of a film about poverty helped to sensitize oral health workers about patients living in poverty in Quebec. They demonstrate how the production and use of the film supported co-learning and the collaborative generation of knowledge.

For a number of years action researchers have been using photovoice, which is a method developed by Wang (1999) that employs the use of still photographs. We have already discussed the use of photovoice as a method for doing action research (see M4.11), but it can also be used as a way to present it to others (Caine, 2010).

Graphic forms of presentation

There are, of course, more straightforward ways to use artistic representations to report on action research. Sketches, caricatures, cartoons, and so on can illustrate what you did and found. Although we usually don't think of them as art, diagrams, tables, and graphs can also be used to present a surprising or thought-provoking finding in this kind of concise form in ways that would attract attention and give rise to discussion.

Oral reports, workshops, and in-service education

Teachers and other practitioners who research their practice acquire experiences and material that are very often interesting for fellow practitioners. An oral report is the most familiar way of communicating experiences. However, this kind of reporting is not necessarily stimulating and effective. It is useful for action researchers to think of different ways of sharing their experiences with other practitioners, taking into account that reporting orally is a form of teaching and needs to be effective in those terms.

A potentially more worthwhile way of communicating these experiences and insights to colleagues is through workshops and professional development courses. In light of this, many action research-based programs and projects include opportunities for practitioners to develop their competencies for running workshops and holding in-service courses (Somekh, 2006a).

Multimedia presentations also typically use presentation software like PowerPoint but add sound and video clips. This allows you to include audio and video data in your presentations. Remember that you must have permission from your participants to show others the data. For reporting back to pupils, patients, clients, family members, and colleagues it is not necessary to produce finished products that stand by themselves without a commentary. For example, you can present clips from video and talk about them, followed by discussion, rather than spending a lot of energy on the production of perfect videos.

Acting on results

Before turning to written forms of reporting on action research, we want to remind you that when you turn research into practical action you are also disseminating research experiences and outcomes. This can mean planning and carrying out changes in your practice as a result of your research. Another possibility is that research findings can lead to strategic or political action. For example, if you find that organizational structures are blocking changes you want to make it might be useful to raise this in discussions of policy within your institution or region. For example, a group of mentor teachers in California used the results of their action research to successfully argue for the continued funding of their program (Ashton et al., 1990).

Written reports

Written reports are only one method of disseminating action research. However, even as more ways of presenting action research are developed, written reports continue to be the ones that are most visible and have the

greatest potential for influencing others. That said, we also recognize that they may not be the most useful way of communicating your knowledge to other practitioners, especially those published in the more academic journals such as *Educational Action Research*, *Action Research*, *International Journal for Lesson and Learning Studies*, and *Studying Teacher Education*. The types of written documents that are more accessible to colleagues and stakeholders include letters to the editor in local or regional papers, notes on the staffroom noticeboard, short articles in a magazine or journal of a professional association. Information about submitting articles for publication in practitioner or academic journals is given on their websites. Those who have not written for publication before should enlist the support of a critical friend who experienced writing for publication. Some journals provide help in the form of a "Supported submission." After the manuscript is reviewed, the reviewers' comments are then sent to the "Supporter" for discussion with the author about any additional work that may be required.

We now turn to different types of written reports. We begin with case studies, which in our wide definition of the term are written reports in which practitioners present information about one case taken from their practice, including the context and starting point, research methods, the stages of the research, findings, proposed action strategies, and emerging issues that may be the subject of further work. You may notice that what we describe has the format that is typically used for a scientific research paper. We then turn to narrative reports, which have a structure that is more like the telling of a story, with a beginning, middle, and end, and with something akin to a plot that moves the story along.

Case studies

There are many different ways of structuring a case study and no fixed rules, but here are some suggestions:

- *Determine what makes it a case.* There are many different ways that cases are bounded. They can be cases of the work of individual or groups of practitioners, pupils, patients, or clients. They can be bounded by a period of time, for example, an academic year or term, or the time period when a patient is in rehab. Case studies can also be organized around a theme (see below) or some aspect of practice, such as high stakes examinations, or reacting to new rules or regulations.
- *Follow the chronological sequence of the research.* The simplest and safest way to write a case study is to communicate your experiences and findings in the step-by-step sequence in which they occurred. It helps with writing and with reading if you also illustrate the chronological sequence in a diagram or list. The chronological form of presentation

is not always the best, because the whole research process is included irrespective of what is more or less interesting. Sometimes it is difficult to make links if the sequence of events and interpretations is chronological. In addition, the chronological order of presentation can occasionally entice the researcher to concentrate too much on description at the cost of analysis and interpretation. We want to make clear that this is not the same as writing a narrative report. A narrative is constructed from data, including observations and reflections, among other types, and is more than a straightforward recounting of events. Please see below to learn more about narrative reports.

- *Develop a case study from an issue.* Many action researchers do not report the whole of their research, but select one or more issues that appear to be of special interest and discuss them in more detail. Writing the case study then becomes a continuation of the analytical process by which the central insights and their supporting data have emerged. Jackie Bridges shared with us in a personal communication the following description of her case study on nursing practice (more details can be found in Bridges and Meyer, 2000, and Meyer and Bridges, 1998).

I was conducting an action research study into the organization of care for older people in the Accident and Emergency department (A&E) at a large, busy hospital. Staff members from A&E and Services for Elderly People (SEP) were involved in the study and early interviews, focus groups and observation work had led to a variety of suggestions for improvement. However, as we worked to make these improvements, a major barrier to change emerged. While many of the changes were dependent on co-operation between A&E and SEP, their working relationship was in fact poor and when external pressures such as high admission numbers or resource restrictions increased, the relationship deteriorated further. As I gathered data on the processes and outcomes of change, I made use of this finding in gathering and analyzing further data. For instance, I would always invite comment from A&E and SEP staff on issues that emerged, and probed them as to theirs and the other department's contributions to patient care and collaborative working. When I analyzed the data, I compared responses from staff between the two departments. This focus led to an understanding that some patients whose quality of care relied on good co-operation between the two departments were in fact losing out because neither department saw those patients' care as their primary responsibility.

Reports based on issues are particularly appropriate when reporting extensive and complex research projects. They are also well suited to action researchers' interest in improving practice or the practice situation.

One drawback is that readers of this kind of case study may find it difficult to identify how your understanding of the situation developed over time. If you choose this format you should explain why certain issues were selected for close analysis, and provide enough background context so that readers can understand the situation.

- *Portrayal.* In a portrayal, an event is described vividly and in great detail without much analysis and interpretation. The idea is that the reader should be able to gain an understanding of the situation and bring his or her own judgment to bear without becoming dependent on the interpretations and value judgments of the authors. Texts of this kind can be very good at stimulating a discussion. However, they are, in fact, analytical although the interpretation is not made explicit, and sometimes this can make it difficult for the reader to get a critical purchase on the situation. It often helps to have a brief addendum that describes the research methods that you used. The use of portrayal or portraiture has been explored extensively by Sara Lawrence-Lightfoot (1983, 2005).
- *Report on action research through the use of key statements.* An alternative to voluminous and elaborate reports is to condense an account into brief, carefully worded statements. You can, for instance, summarize the outcomes of your research in a well-structured, written presentation of about one or two pages. Short reports like this are common in journals or magazines for practitioners published by professional organizations, or on websites. For example, the article on the use of metaphors in divorce mediation in Chapter 6 was only a few pages long.

An extreme form of reduction is a list of hypotheses or propositions. Again, this is the type of reporting that we often see on websites or in practitioner journals. It is also a common way to report outcomes in presentations using software like PowerPoint, or in poster presentations (see Naphray, 2014, for an example of the use of poster presentations). The brevity of this form of presentation has its strengths and weaknesses. It is not easy to condense a lengthy research process while still retaining the analytic detail. However, this is an important achievement if it is possible to master this conceptual challenge and present the main insights gained in a brief but clear and intelligible way. Condensed forms of reporting are generally short enough to be easily read, but they are often too thin to be illuminating to the reader. In addition, supporting evidence and the implications of the research are often left out, so that the reader does not know how the statements were arrived at, and what conclusions can be drawn from them. A way of overcoming this is to follow each hypothesis, proposition, or conjecture with some extracts from data that provide enough of the

context to enable the reader to understand it. This could be done, for example, by following the suggestion in M6.8.

- *Shed light on a case from different perspectives.* We have experimented with a form of reporting in which we present a particularly vivid scene, event, or short extract from data and illuminate it from different perspectives. The scene is like a prism with its facets illuminated from different sides so as to provide different meanings. The idea is to stimulate the reader to review the significance of the scene with respect to his or her own practical experience. For example, Herbert Altrichter (1984) described how he used this method with his teacher education students. He provided them with just two short scenes that he observed in which the teacher interrupted his teaching and left the classroom for a few minutes. He gave his students a variety of materials that were relevant to a consideration of “intermissions” or “pauses,” including definitions from educational encyclopedias, statements from learning theory, a written account from his own experiences in teacher education, and a short story by Bertolt Brecht called ‘The Art of Stopping Teaching’ (Brecht, 2016).

One potential disadvantage of this form of reporting is that the desire to stimulate ideas may become stronger than the writer’s consciousness of the importance of giving an exact account of what happened. In any case, to be successful, this kind of reporting must be clear and vivid so that it brings the reader to reflect deeply on the scene for some time.

Cross-case analysis

Sometimes a group of practitioners forms a project team in which each member of the team writes a case study about some aspect of the practice. In this situation, it can be useful to analyze the cases as a set to uncover similarities and differences that further illuminate the overall project goals. Another possibility is that a group of action researchers may find that they are interested in a similar issue and decide to come together to analyze their case studies. An example of this was a group of doctoral students enrolled in a graduate seminar on action research with Allan who were involved in the supervision of student teachers. At the end of the course they decided to work together to see what they could learn by combining their individual cases. They reported their findings in a traditional academic format at conferences and in an article (see Feldman et al., 1998) and in the form of a play that they presented as readers’ theater. Another group of doctoral students continued their action research on their roles as supervisors of preservice English teachers, and analyzed their work through a cross-case analysis (DiCicco, Sabella, Jordan, Boney, & Jones, 2014).

M8.2 Producing a cross-case analysis as a team

The method we present here was developed as part of the Teacher-Pupil Interaction and the Quality of Learning Project (TIQL). In that project, teachers produced about 30 case studies. They then faced the task of preparing an analytical summary reporting the main points of agreement and any differences in their outcomes. Although the method was developed for a teacher research project, the procedure we outline below would be useful to any group of practitioners. You will note that this method includes the role of "project coordinator." It would be possible also for one of the practitioners in the group to take on this role.

Procedure

- 1 Each member of the research group brainstorms a list of the most important issues that had arisen in his/her research.
- 2 The project coordinator reads all the case studies and from these, and the group members' lists, develops a list of issues. It is possible for all of the group members to share in this part of the procedure and then use one of the group decision-making methods that we described in Chapter 7 (M7.3–7.5) to settle on a list of issues.
- 3 The group members and any outside facilitators and/or critical friends set aside a significant amount of time for a cross-case analysis retreat. We hesitate to suggest how much time would be needed because of the huge time demands on practitioners' lives. That said, we would suggest a minimum of a day if at all possible.
- 4 The group discusses the identified issues to clarify them. Some will be eliminated; others may be combined. The group then splits up into smaller groups, with each small group focusing on one issue of their choice. If there is an issue that no one chooses to focus on, that is an indicator that either the issue is actually a non-issue or that it is so problematic that no one wants to deal with it. In any case, it is worth exploring why an issue that was identified by the team is "orphaned."
- 5 Each of the groups reads the case studies that appear to be relevant to the issue.
- 6 Based on their notes from reading, each group produces brief analytical notes, including the following:
 - hypotheses summarizing in one sentence the main points of agreement and any differences arising from the case studies,

- comments explaining each hypothesis, and
 - references to illustrative material in the case studies.
- 7 The brief analytical notes can be used as the basis for writing analytical summaries on each issue, which can then be used to report what was learned from the cross-case analysis.
 - 8 The separate cases and the cross-case analysis can then be collected and distributed, either through print or the Internet.

Writing narrative reports

A narrative is simply an account of connected events. They can be spoken, written, drawn (for example, a graphic novel), or portrayed in a play or a movie. Narratives can be distributed through print or the Internet, or even by word of mouth by storytellers. We are concerned here with the reporting of action research and will focus on written narratives. That said, a written narrative can be transformed into any of the other forms of presentation.

Over the past 30 years much has been written about narrative research and inquiry (for example, Attard, 2012; Connelly & Clandinin, 1990; Hamilton, Smith, & Worthington, 2008; Josselson, 2006; Kim, 2016; Walker, 2007). In research, narratives can be a type of data, as can be seen in the classic piece, 'Life as Narrative,' by Jerome Bruner (1987). Narrative can also be a way to analyze data for any form through the construction and reconstruction of stories that connect the data in meaningful ways. Finally, the outcomes of research can be represented in the form of a narrative, which is what we focus on here.

As we noted above, much has been written about narrative research and inquiry. However, we find one of the early pieces by Connelly and Clandinin (1990) to still be one of the best introductions to this type of research. Much of what follows comes from that article. To Connelly and Clandinin, "Stories function as arguments in which we learn something essentially human by understanding an actual life or community as lived" (p. 8). If a narrative report of action research is to do this, it needs to be written in a way that is invitational and explanatory. That is, it gets the readers' attention, engages them in the story, and in doing so explains what happened and why in the action research.

Narratives are constructed with scenes connected by a plot. Scene is "where the action occurs, where characters are formed and live out their stories and where cultural and social context play constraining and enabling roles" (Connelly & Clandinin, 1990, p. 8). To do this, scenes need to contain the particulars of the situation that lead to the type of recognition that "rings true." To evoke this in the reader, scenes include character sketches—details about participants, and descriptions of the setting and the

context. The setting is where the action takes place, while the context provides readers with a sense of the wider milieu in which the scene takes place. For example, a scene in a detective novel might be when the detective first sees the site where the crime was committed. In order to understand what is going on in the scene, we need to have knowledge of the detective and other key players in the scene—the character sketches—and a description of the setting in which the scene is taking place. The context then provides us with the knowledge about how the detective and other key players connect with society outside of the particular setting. For action research done in a school, we may want to have character sketches of teachers and pupils, and a description of the setting—the classroom, for example—where the teachers and pupils interact. But we also want to know about the school, about the sociocultural aspects of the community in which the school is located, and about other stakeholders, like administrators and parents.

The narrative is constructed by tying together the scenes with a plot. The plot is basically the structure of the story that you want to tell. It is your response to the questions, problems, dilemmas, or dissonances that you identified in your starting point for your action research. Writers think of plots as having beginnings, middles, and ends. The most common way to construct the plot is in temporal order—past, present, and future. We encourage novice narrative writers to use a temporal plot structure because it is the most straightforward. However, there are many other ways that plots can be structured as you've likely seen in books, plays, and movies.

We end this section with two Ms. They can be done in any order.

M8.3 The elevator pitch

Traditionally an elevator pitch is a short, persuasive speech used in business to spark interest in a product or an organization. The reason that it is called an “elevator” pitch is that you should be able to make the pitch during a ride in an elevator.

One way to begin to prepare the plot of your narrative is to write an elevator pitch of your action research and to deliver it to your research group or critical friend. We find the typical length of an elevator pitch, 20–30 seconds, to be too short and suggest instead one to one-and-a-half minutes. In business, the elevator pitch may answer the questions, “What do you do?” and “What is in it for me (the listener)?” For action research, possible questions include “What did you do?” “What did you learn?” and “How can that help my (the listener's) practice?”

After you give the pitch and get feedback from your research group or critical friend, you can revise it and use it as a tentative summary of your narrative.

M8.4 Annals and chronicles

In their work with teachers, Connelly and Clandinin (1990) used the ideas of annals and chronicles to help the teachers write narratives about their work. Annals are simply dated records of events with no apparent connection among events. Chronicles include information that shows that the events are linked, but “the meaning of the events, and the plot which gives the explanatory structure for linking the events, is unstated” (p. 9). Connelly and Clandinin argue that the process of writing a narrative can be facilitated if writers begin with annals, and then transform them into chronicles by describing how the events relate to one another. They have found that this is a more manageable task than writing a full-fledged narrative, which would include plot, and interpretation and explanation of what happened and why.

Getting started with writing

For many people the most difficult step in writing is to start—to actually put pen to paper or fingers to keyboard. The good news is that you’ve already done this. If you’ve used this book to find your starting point, develop a research plan, and analyze your data, then there is already much that you’ve written that can become part of your action research report. That said, you might need a bit of a kick start. The elevator pitch (M8.3) can help, and you might also look again at M2.3, which can be a useful exercise to help develop your writing through in-depth reflection. M8.4 and M8.5 are other ways to get your writing going.

M8.5 Collegial interview

This activity puts you in the interviewee’s seat to get you to orally articulate your thoughts about your action research study (modified after Prideaux & Bannister, undated).

- 1 Ask someone from your research group, your critical friend, or a colleague to interview you about your research and record the interview. It is often easier to talk about experiences than to write them down, especially if your interviewer shows interest and prompts you with requests for detailed descriptions and explanations. They should try to get you to think about your practice situation, what you found problematic in it, what

- you've learned, and how it might be useful to improve your practice and that of others.
- 2 Transcribe the interview or parts of it (see M5.8).
 - 3 Mark those passages that contain important statements referring to your research question, the research situation and its context, or your methodology. Arrange these passages in a sensible sequence that tells what you did, why, and what you learned. You may want to do this physically by cutting them out from the paper and arranging them on a table or the floor, or you could use software that allows you to look at relationships intuitively, such as *Inspiration*.
 - 4 Construct the first draft of your report from these passages. It will be necessary to write intermediate passages to link the passages from the interview.

There are many resources that you can go to online or in print for advice on how to write for different audiences. There is also a good chance that you know someone who is an experienced writer or even teaches writing. For example, Allan consulted with one of his colleagues, Janet Richards, about how she helps her students write better reports. She emailed him a list of suggestions for writing that we have edited and reproduced below:

- Know your audience and write for them.
- Read articles from journals that serve your audience to become familiar with their expected styles.
- Write in active voice as much as possible. It is fine to use "I" or "we:" don't take yourself out of your research.
- Start off with a simple on-topic sentence. Don't digress. Don't take forever to get to the point.
- Write plainly but use specialized vocabulary when appropriate.
- Don't be too wordy but provide enough context so that your readers can make sense of your situation.
- Vary your vocabulary, but if, for example, you begin your report using the term pupil stay with that term; don't switch to children, or students.
- Your readers need "signposts" to help them navigate your report. Guide them with headings and subheadings.
- Monitor your writing continuously. Know what you are saying and why.
- Remember that time spent revising is time well spent. Be prepared to revise and edit many times.
- Try to make your writing as enjoyable to read as a good novel.
- Remember that good writing is good thinking.

M8.6 What does writing mean to you?

This activity is structured to be used by a group of action researchers. It can be done by the members of an action research group, by a research team in a project, or as part of a professional development workshop or course. It is, of course, possible to do this exercise by yourself or with a critical friend. If this is done as group work, it helps to have someone act as the facilitator.

- 1 *Individual work (15 minutes)* Each person writes a short piece covering the following questions:
 - From all the written texts you have ever produced, which piece are you most proud of? Why?
 - What was your last piece of writing? What kind of writing have you done most often during the past year?
 - What causes you problems in writing? What is fun?
 - On the basis of your answers so far, try to respond to the following question, if possible in a single sentence: What does writing mean to you?
- 2 *Pair work (20 minutes)* Partners exchange their writing, read each other's, and discuss any differences, similarities, or surprises.
- 3 *Plenary (20–30 minutes)* Anything interesting or controversial that emerged in the pair work is reported to the group. At this stage, it usually becomes clear that in one way or another everybody has to cope with writing difficulties. It can be helpful if the facilitator joins in by presenting his/her own experiences and difficulties with writing.

In the remainder of the chapter, we first provide suggestions like those from Richards above to help you with your writing. Although some of them may fit a case study report better, they are also useful for writing narratives. We end with some criteria that you can use to review the quality of your writing and improve it.

Toolbox for producing written reports

1 Take it step-by-step

Try not to think of the writing task as a huge enterprise in the future, but as a continuous process to be built up step-by-step. You have already taken the first steps: the records in your research notebook, your data summaries, analytical memos, hypotheses, and so on.

2 Don't aim for immediate perfection

Don't expect to produce a finished manuscript straight off. Give yourself the right to begin by producing a draft that you will revise later. This attitude helps to reduce the stress when writing.

3 Try to get feedback

Whenever it is possible, give your draft to someone in your research group, your critical friend, or perhaps a colleague and ask him or her to read it and comment on it. This feedback may be more relevant if you suggest some questions to guide the comments. When you are given feedback, it is best not to defend yourself or to correct "wrong interpretations" (after all, you may not have written what you intended to say!). Try instead to get as much as possible out of your reader. Then spend an hour or so quietly reflecting on it and deciding which points you can use to develop your report and generally improve your writing. Most people find it stressful at first to receive comments on their writing (probably because writing is such a personal process), but it is ultimately very reassuring to go through this stage before distributing a report more widely.

4 The right place to write

Virginia Woolf told us that "a woman must have money and a room of her own if she is to write fiction" (Woolf, 1929, p. 4). Practitioners also need the time (that is, money) and a place that has a relaxed atmosphere where they cannot easily be disturbed if they are to develop and express their ideas in words. Obviously using a computer can greatly facilitate your writing. However, some people like to write a draft out first on paper and then type it into the computer for editing. At the end of some action research projects a writing retreat is scheduled, to provide time and quiet in a pleasant atmosphere for writing and consulting with colleagues and external facilitators.

5 Resources and materials

Before you begin to write, all the resources and materials you may need should be easily accessible. Some important resources include:

- Your data, such as your research notebook, observation notes, and analytic memos;
- Something to write on, whether it is paper or a computer. Make sure to back up your computer files!
- Books and other resources that you may need to refer to (for example, a dictionary, a relevant policy document or report, the action research

study a colleague has written on the same issue, or a book or an article that has been important in your thinking during the research. Of course, good Internet access will provide you with many of these resources as well as much more.

6 *Shaping your argument*

Your report should be more than just a telling of events of what happened. It should present an argument for why what you did and learned is important to you and other practitioners. In the past, when most writing was done on paper, it was important before you actually began to write to think about the shape of your argument and how this shape could best be expressed in the structure of your written report. With the use of computers and the ease of editing text, it is not as important for this to be well thought out ahead of time. In any case, for this purpose, it is useful to think about the starting point of your action research and to re-read your data analysis. It is often helpful to make a plan, outline, or diagram of your argument: which are the main points and what will be the best order in which to present them? The clusters exercises outlined in M2.3 can help you to start, as well as the elevator pitch (M8.3) and the collegial interview (M8.4).

Above all, the purpose of this is to get a vision of the thread of the argument that will form the backbone of the writing, and that the reader will be able to follow. The form that this takes will depend on the theme of your study, your chosen form of presentation, and the nature of the results. It might be a chronology of events, a step-by-step exploration of an intriguing issue, or a telling metaphor used to establish connections among different areas.

7 *The introduction*

The introduction to a written report should tune readers into the text and prepare them for what is to follow. While it is the first part of the report, it often makes sense to write the introduction after you finish the first draft because at that point you will have a much better idea of what the final report will say. The following questions can serve as a guide for writing the introduction for your report. Remember that you do not need to answer all of these questions fully in the introduction because you will come back to much of it in the main body of the report.

- What questions, problems, dilemmas, or dissonances in practice did you investigate in your action research study?
- What was the context of the study? What background information do readers need to understand it?

- What research methods did you use?
- Why is this question important to you? What importance might it have for your colleagues?
- What is the structure of the report?

When planning the report, you should try to give yourself provisional answers to these questions. However, some of the answers will change or develop during the process of writing. Therefore, it can be helpful to jot down a few catchwords for the introduction while working on the plan of the report and make a note of other ideas while writing the report.

8 Supporting arguments with data

When you are ready to report to others what you learned in the action research process, you can look back to the experiences and data that you used to develop insights. When you write the report, these experiences and data should be used again and again to provide evidence for your main arguments and to illustrate them—by literal quotation, paraphrasing them, or referring to them.

Sometimes action researchers use quotations from their data in the written report without noting their source. This seems to be not so much the result of carelessness as a failure to recognize that *their* data are important. This is unhelpful modesty because it is important to reference quotations properly to the data. An easy way of cross-referencing your report to the data is to list the data in an appendix, or as a table in a section on research methods, and give each item an abbreviated code and number that can then be used in references (see Chapter 6).

9 Informal data

While writing the report sometimes ideas and experiences come to mind that support or modify the argument but are part of the data that you collected and documented. It is useful to reference these kinds of experiences by describing the event that produced the idea, for example: "This assumption is borne out by my experience in a role play with class, when the following happened ..."

10 Giving examples

Examples drawn from personal or professional experience can add a sense of verisimilitude to your report so that it rings true to your readers. In everyday conversation, we use examples if we are not able to explain something on a more abstract level. When we sense that we are not being understood we take a step back, so to speak, and draw on a concrete example.

11 Defining processes, concepts, and acronyms

All professional practice requires the use of specialized terms to label processes and concepts. When the terms are used frequently, we usually use acronyms for them. Also, many of these terms have different names in different locations. In addition, because you have worked on your action research study for some time, your understanding of what these terms mean may be different from how the readers understand them. Therefore, it is important to clearly define them and any acronyms that you use. You may find that diagrams are sometimes useful to illustrate the relationship between different concepts.

12 The conclusion

The conclusion is one of the most important parts of the report. While the introduction welcomes the readers into your account of your action research study, the conclusion sums up what you did, what your results were, and why they are important to you and other practitioners. You can use the conclusion to answer questions like these:

- What were the outcomes of your action research study?
- What ideas for practical action emerged? Which did you try out and what did you learn?
- Which questions remained unanswered or arose as a result of doing action research?
- In what larger context could the issue(s) discussed be subsumed?

13 Implications

Most likely there will be implications of your action research for you and others, such as other practitioners, administrators, and policy makers. The implications can either be embedded as part of the conclusion or be a separate section of the report. Elliott (1985) provided us with some suggestions for how the implications ought to be presented so as to increase the likelihood that changes would be implemented in the practice situation.

- Specify concrete procedures for accomplishing change.
- Provide examples of how these procedures might be implemented in typical classroom [or other practice] environments.
- Specify ways in which procedures can be legitimately adapted and modified by teachers [or other practitioners] in the light of their own assessments of particular situations.
- Provide examples of the sort of benefits teachers [or other practitioners] can expect in return for the effort they are expected to put into the implementation process. (Elliott, 1985, p. 159)

This does not mean that practitioners have no interest in the ethical and theoretical justifications for their practice. It simply means that new ideas must show themselves to be practicable, before they are given detailed consideration. It follows that it is important to include examples in written reports, to illustrate the practicability of theories and their likely consequences.

Suggestions for improving technique

We now turn to some suggestions to improve the technical aspects of your writing.

14 Techniques for providing structure

The inner structure of the writer's ideas, the logic and thread of the argument, should be clear in the design and presentation of the text. Here are some ideas:

Use linguistic patterns that imply structure

- On the one hand ... on the other hand ...
- Both ... and ...
- At first ... then ... finally ...
- First ... second ... third ...

Highlight passages

- Underline
- Capitalize
- Italicize
- Use bold type
- Use large type

Employ structuring devices

- Divide into paragraphs
- Indent to show new paragraphs or quotations
- Use single and double line spacing (for example, present quotations from data in single spacing and the rest of the text in double spacing)
- Use subheadings
- Use stars, bullets, numbered points, etc.

Include passages of text that indicate the structure of the argument

- Introductions that introduce the reader to the flow of the argument and provide necessary background information;

- Passages that summarize the most significant points so far (either at the end of a section or as a conclusion to the whole piece);
- Explicit transitions from point to point (for example, "Now I come to my third point");
- Diagrams showing the structure of particular arguments or concepts.

15 Procedures for quotations and references

When writing a report, you will refer to your own data, but also to other people's ideas taken from published books, papers, and websites. Quoting is an established tradition. Quotations must be formally referenced to allow readers to cross-check and to follow up ideas in the literature. The reference can also be helpful for you, as author, if you need to go back to an original source to make corrections or wish to refer to it again in a subsequent report.

There are several different traditions for setting out quotations and referencing them to their source. Thus, it is better to stick to one of the established styles that is used in your favorite journal or book rather than invent a new one. Whichever you use, make sure it is used consistently throughout the report; and that the sources can be quickly identified by the reader without having to spend a lot of time looking for them.

Learning to be flexible in writing

Previously in this chapter we discussed the many different ways in which action research can be reported and disseminated to others. In order to produce a high-quality report, it is often necessary to use a writing style or genre that you are not comfortable with or may never have used before. This activity, based on an idea from Gibbs (1977), can help you to be more flexible in your writing. Although this activity is structured for a group, you can do this by yourself or with a critical friend. And again, if you are doing this as a group, it helps to have someone act as the facilitator.

- 1 *Individual work*: Participants are asked to write a description of an event that is part of the shared experience of the group. An alternative is to watch a short extract from a video together and then describe it individually.
- 2 *Individual work*: After about ten minutes the facilitator interrupts this work and asks the participants to write a second description of the same event but in a completely different style or genre.
- 3 *Pair work*: Partners exchange their writing, read each other's, and discuss the differences in their approach.
- 4 *Plenary*: Partners report back on this experience in a plenary session, and the group as a whole discusses the strengths and weaknesses of the different ways or genres in which the event was represented by group members.

Criteria to use in writing reports

As you have read through this chapter, used its Ms, and begun to develop your action research report you have thought carefully about its contents and possible audience. We now would like to make some suggestions of some criteria that you can use as you review what you've prepared and edit it. It is important for us to make clear that although there are some criteria that are commonly agreed upon, there is not enough agreement to make the decisions unproblematic. The criteria we discuss below are the ones that we use. We can give good reasons for them but that does not necessarily make them any more important than a different list that someone else might put forward. It may be that you have some constraints on the style of your report because you are preparing it as part of a course or larger project, or for policy makers. If you are not, we recommend that you develop a personal style that suits you and is accessible to the reader. It may be helpful if you begin by defining the criteria that you yourself use in judging written texts, for example, by asking questions such as:

- What kind of texts do I enjoy reading?
- Thinking back to the last two texts I have read, what did I like and what didn't I like about them?

It is also useful to compare your ideas with other people, such as your research group or critical friend. Below are some of ours.

1 Is the context of the research made clear?

One of the best things about doing action research is that we are immersed in the situation that we are investigating. Because of that, the context of the situation may be obvious to us. However, it isn't for your readers. Make sure that you describe the specific characteristics of the situation and the research context. In addition to physical aspects of the context and characteristics of the major players, it is important to make clear your judgments of the conditions and the likely validity of your insights. It may also be necessary to make explicit what your preconceptions were.

Action research findings are not directly transferable to other situations. They are transferred by your audience coming to understand what you did in your situation and then applying what they learned from you to their situation (See Stenhouse's telling phrase: "Using research means doing research" (1985, p. 92). To be able to reflect on other people's experiences in his or her own context, the reader must have an understanding of both the general context and specific features of the action research study.

2 *Is the writing supported by data so that a reader can easily visualize what happened?*

We collect data to better understand our practice situation so that we can come to a better understanding of it and to improve. Make sure you give supportive arguments for your claims and credible evidence from the data. Data can also be used to make clear both the context of our studies and their results so that they can be sufficiently clear to be understood by readers who have no direct experience with them.

3 *Are conflicting evidence and alternative interpretations considered?*

We usually write the report of our study either after we have completed it or as we are nearing the end. We've put a lot of time and effort into it, and have a strong desire that our investment was worthwhile. The tendency is to want to present clear-cut results and, in trying out action strategies, we hope to be able to report success. Practitioners and academic researchers both share these expectations. Practitioners often feel under pressure to take action and be successful—especially if they are involved in innovations. This may sometimes mean there is an even stronger tendency for them to want to come up with definite findings and demonstrate success than is the case with researchers who enter the situation from outside. We call this the “need to know.” For example, Andria Erzberger did action research on innovations that she implemented in her physics classroom. She wanted to know whether what she was doing differently was more effective than what she had done in the past. That is, by embracing new forms of pedagogy and assessment, were her students learning at least as much physics content as before while coming to a better understanding of how physics relates to their everyday lives (Feldman, 1994)?

There is a real danger of cheating oneself and others with definitive success stories. Reporting the outcomes of action research *does* serve to increase a practitioner's personal profile and that of his or her profession; however, this should not be its primary and dominant function. The main aims of writing reports of action research should be to enable more reflection on your work and situation to improve professional practice, and to share what you've learned with others. It is important to discuss discrepancies in your data, and the resulting contradictions and inconclusive ideas in your report. They provide much better starting points for both the writer's and the reader's further learning than clear-cut success stories. Therefore, we suggest that you present arguments and data that both support and challenge your opinions, and that you include conflicting data and other possible interpretations in your report. This helps to make the report more generative, that is, it invites

the reader to reflect on his or her own practice. We also suggest that you discuss any potential sources of error; that you include comparisons drawn with colleagues' experiences or with findings reported in the research literature.

4 Does the presentation include analyses or is it primarily descriptive?

There is a tendency, especially the first time you write a report, to offer very few analytical points and interpretations. We believe that it is important to include them because an aim of action research is to gain a better understanding of professional practice and this is not possible without developing specific explanations and *practical theories*. To do this, we suggest that you provide interpretation and explanation of the events as well as description; that you establish links between points that you are making; and that in your report you draw upon your conclusions to develop subsequent action and open questions for further investigation.

5 Is the report ethically defensible?

We have already addressed some ethical issues in Chapter 5. They are part of the whole research process but are of special importance when it comes to producing written reports of the insights gained through the research. It is important for you to be an ethical researcher and to make sure that your audience knows that you did your research in ways that respected the rights and concerns of others. Make sure that you report how you negotiated with all those concerned as to what would be put into the report and told them that you intended to make it public, and how you have respected the confidential nature of some of the information. This includes asking for their feedback and incorporating it into the report.

6 Is the text written in a way that is understandable, vivid, and interesting?

You want your audience to be engaged in your report. Unfortunately, too many action researchers write their reports in a boring and long-winded manner. When writing action research reports, it is important to take the trouble to make them readable and linguistically attractive. To do this, the linguistic and formal characteristics of the text need to make reading it enjoyable rather than requiring readers to fight their ways through the text. It is good to arouse emotions by including striking and interesting passages, stimulating ideas, and specific examples and metaphors used (see M6.6).

Further ideas about writing

Writing is difficult. It is often hard to put ideas down on paper, even if they seemed clear and logical when thinking or talking about them beforehand. We find gaps in our arguments and some concepts are too vague, as new connections and implications come to our minds. These difficulties spring from the fact that writing is not just about communicating the definitive outcomes of analysis, but is in itself a form of analysis. It is a continuation of the process of analysis under narrower constraints, because our inner thoughts have to be given shape and form. Writing is, therefore, a crucially important part of the research process, in which the writer/researcher goes through a powerful, reflexive process, and analysis of the data is deepened and clarified (Somekh, 2006a). Although we may see our writing as provisional, it becomes our product in a material sense and can be examined by other people. As a result, writing offers us a new kind of depth to our reflection and research. This is, of course, true for any mode of representation of report, whether written or one of the more artistic forms.

Action research places a premium upon the dissemination of professional knowledge—including written reports—because one of its aims is to prevent professional education, and research into practice, from being completely surrendered to experts who are external to the field. However, practitioners' difficulties with writing are, in part, a result of their jobs not requiring them to write much if at all. In terms of their career, it is irrelevant whether or not they investigate their practice and/or publish written reports about it. Furthermore, their work does not usually allow the space or time to reflect deeply on their experience and write about it. Stenhouse (1975) and Schön (1983) suggest that the ability to reflect upon and improve practice, and present this for public scrutiny, is what distinguishes a professional. If they are right, professional organizations should strive to ensure that these qualities are taken into account in training and promotion, and suitable working conditions provided to promote them, for example, by creating time for reflection, and opportunities for debate with colleagues, during the working day. Action research projects try to provide practitioners with a better context for reflection, for example, by establishing research groups to discuss experiences, providing the guidance and facilitation of critical friends, and suggesting practical research methods. Unfortunately, in the current era of accountability, practitioners' work, especially that of teachers, is becoming less and less professional as policy makers impose strict constraints on their ability to engage to go beyond the most technical aspects of their practice. That said, we believe that action researchers should master the art and science of writing as one among many methods of making their research knowledge public. Finding words to present meaning in writing is always a creative process

that adds significantly to the potential impact of the action research work. All of this suggests that it is important to develop better writing skills and find ways of incorporating action research as an integral part of professional practice.

Note

- 1 In his inaugural lecture, entitled 'Research as a basis for teaching,' Lawrence Stenhouse said, "Research is systematic enquiry made public" (1983). In Stenhouse (1981, p. 103), it reads, "Research is systematic, self-critical enquiry."

Examples of action research studies published in journals

In this chapter, we want to present some action research studies whose authors have “gone public” by writing up their work for publication in a journal. In Chapter 8, we suggested that before you start writing you need to decide on the possible audiences you are writing for and the criteria you might use in planning your writing. The studies we want to share with you in this chapter are intended to help you make these decisions by providing examples that may suggest ideas to you. Since 1993, the international journal *Educational Action Research* (EAR) has published articles by action researchers in education and across other professions, particularly in the fields of health, social work, and community development (<http://www.tandfonline.com/loi/reac20>). Since then, the number of potential outlets for reports of action research has grown. While in the previous edition of this book half of the examples came from EAR, only two are from it in this edition. Two are from chapters in edited books, two are from other journals—*Studying Teacher Education* (<http://www.tandfonline.com/loi/cste20>) and *Equity and Excellence in Education* (<http://www.tandfonline.com/loi/ueee20>). The two remaining examples come from the annual conference of the Action Research Network of the Americas (<http://arnaweb.org>) and from a website dedicated to publishing practitioners’ accounts of their research (<https://www.socialpublishers-foundation.org>). In addition to the wide range of publication outlets, they also illustrate a wide range of approaches to action research used in projects in education, health, and community development carried out in five different countries—the US, the UK, Sweden, Israel, and Venezuela. We hope that by reading the summaries of these articles and our commentaries on them you will be inspired to write your own articles for publication. We hope you might also download the articles from their websites and read them in full so that you can see if you agree or disagree with our comments.

As we have shown throughout this book, and do so in this chapter through the various examples, educational action research can serve many purposes, such as developing programs to help marginalized students

(Azuela, May, & Ortega, 2017; Nutti, 2016) or addressing end-of-life issues (Froggatt et al., 2014); improving one's own practice (Marx, 2004; Maxwell, 2015; Rebolledo, 2017; Senese, 2005); and professional development (Mamlok-Naaman, 2014). We look at each of these examples in the following sections: classroom practice carried out by teacher-researchers; participatory action research; self-studies; and action research for professional development.

Studies of classroom practice carried out by teacher-researchers

Although we usually use the term “teacher” to refer to someone who teaches in formal educational settings at the preK–12 levels, we acknowledge that action research is done by post-secondary instructors as well as classroom teachers. Therefore, in this section, we give an example of an action research study done by Sally Maxwell (2015), a high school English teacher; and a second done by Sherry Marx (2004), an instructor of preservice teachers at the undergraduate level.

Email as an object of critical practitioner inquiry

Sally Maxwell's action research study was of her practice as an English teacher in a highly diverse high school in the US. Most of the students were African Americans, Blacks from the Caribbean, and Latinos. The remaining 20 percent were European Americans. It was a school that was feeling the pressures of the accountability movement, and had recently been labeled as “failing” under the terms of the No Child Left Behind Act (US Department of Education, 2001). In her study, Maxwell examined her use of email as a way to communicate with the students in her 11th-grade class. In particular, she asked:

- What does email reveal about the ideological content of my communication with students?
- What role does email play in my relationships with students?
- How could I use email transformatively?

(Maxwell, 2015, p. 275)

Her article in *Educational Action Research* focuses on her interactions with two students: Adriana and Jason.

Maxwell first began to use email in the way that the administration of her school intended as an information conduit to clarify assignments, for students to submit make-up work, and for grading. As the school year progressed, she encouraged the students to email her drafts of the essays that they were writing. A few of them began to do that, and Maxwell

engaged in a long and serious conversation (Feldman, 1999) through email with Adriana for the remainder of the year. In the article, Maxwell provides examples of the types of exchanges that the two of them had about essay writing. In doing so, Adriana's ideas about essay themes as well as the technical aspects of writing became the focus, rather than the instrumental use of email envisioned by the school administration, or for discussing grades. Adriana also used email as a way to have private conversations with Maxwell about public issues in class. One that Maxwell highlighted was the common problem of unequal contributions to group projects. While Adriana at first thought of it in terms of grades, Maxwell was able to shift the conversation to her vision for engaging the students in group assignments: "the idea that education is a private good, even though the advancement of all of the group members through collaboration was my explicit purpose" (Maxwell, 2015, p. 279). As the year progressed, Maxwell and Adriana's email conversations broadened to include discussions of Adriana's college plans, and they engaged in more face-to-face chats about the class and her aspirations.

From the above it is clear that Maxwell's use of email to communicate with Adriana was successful. It was not so with Jason. Although he emailed Maxwell frequently, it did not appear to have a positive impact on their relationship or on his learning. The examples of the exchanges that she provides shows a student trying to con the teacher for grades, and the teacher trying to catch him at it "to cut through confusion and deception" (Maxwell, 2015, p. 282). Maxwell noted that "As a teacher or a researcher, I did not understand what to make of Jason. Practitioner research might not have helped me know or teach him better, but at least it helped me see my failure" (p. 283).

Maxwell used a critical framework to understand why she had such different experiences with the two students. Email began as a way to have the time and space to have reflective conversations in "a classroom besieged by management challenges and the pressures of accountability ... [to] counter the relentless pressures of efficiency and coverage that high-stakes tests bring to a classroom" (Maxwell, 2015, p. 285). Adriana was receptive to using email in this way and accepted Maxwell's invitation to do so. Jason, on the other hand, did not see email as a way to engage in reflection and instead used it as the way it was intended by the school administration. To him it was a tool to help him do what was necessary to succeed (have passing grades) given his opposition to schooling and the lack of mutual respect between him and Maxwell, and between him and the school administration. To Maxwell these differences highlighted the ways in which her teaching was being subverted by the power of the accountability movement. While her interchanges with Adriana eventually became what she wanted of them, they began with Adriana asking for feedback on her essay draft so that she could get a higher grade. For Jason,

there was no easy entry into the transformative use of email because he was not interested in doing the required work. As a result, Maxwell's invitation was insufficient to engage him in the types of conversations that she was seeking.

The article ends with Maxwell providing us with the changes that she's made in the use of email in her teaching. These include building email communication into the classes from the beginning, creating public digital spaces for students to share ideas and respond to each other's work, and using online class discussions early on in the term. She also incentivized email and face-to-face conversations with higher grades, praise, the opportunity for students to shape the curriculum, and snacks. The result is that she has email or face-to-face conversations with almost all of her students.

Maxwell's action research study could be seen as an example of technical problem solving. She wanted to use email as a way to better communicate with her students about their work, and she accomplished that with the various incentives. Where the critical lens was important, however, was in understanding the difference between the ways in which Adriana, Jason, and Maxwell herself responded to the pressures and power of the effects of the accountability movement on the students, the school, and her practice.

Exploring whiteness in teacher education

The focus of Sherry Marx's study (2004) was her teaching of a course entitled 'Second Language Acquisition' (SLA). This was a required course for preservice elementary education students at a large university in the southwestern US. The purpose of the course was to prepare them with the knowledge and skills that they would need to teach in classrooms that had large numbers of English language learners (ELLs). These ELL students were primarily of Mexican descent and were being raised in households where the first language was Spanish. In the US, elementary school teachers are primarily female and white. This was reflected in the makeup of Marx's class in which about 85 percent of the students fit these categories. As a way for these students to experience working with children whose home culture was very different from theirs, and for whom English was not their first language, they were required to tutor ELL students in local public schools for ten hours/week.

Marx began her study with questions that arose from her desire to understand the perspectives of her students better, including "their beliefs, the ways that their own racial backgrounds affected their beliefs, and how tenacious these beliefs would be if challenged" (Marx, 2004, p. 34). Because her concern was in the disjunction between the culture of the majority of her students and those of the ELL students they would eventually be teaching, Marx invited female students who considered themselves to be

both white and a monolingual speaker of English to be participants. Nine, ranging in age from 20 to 35 years, volunteered. The methods that she used included interviewing the students, reviewing their tutoring journals, and observing them tutoring. In addition, she tutored a fourth-grade ELL student at one of the local schools. After transcribing the data, she coded them into themes, using a theoretical framework that drew upon the literature of critical race theory and critical white studies. From these data and her analysis of them, she found that the students “were influenced by their whiteness and white racism, [and that] Some of these influences proved to be detrimental to the children they tutored” (p. 35).

As you can see from the description of the methods that Marx used, she was initially engaging in what we would consider a “traditional” qualitative study of her students and their experiences. However, she was struck by a dissonance between how the students thought of themselves as “open-minded,” “tolerant,” and without prejudice and what she found in her data about their beliefs and actions. She described this as follows:

I began to experience an ethical dilemma. I could see the good intentions of participants, but I could also see the white racism that they could not yet see. As a researcher, I was recording the ways that white racism manifested itself in the tutor–tutee relationship. As an instructor, I was sending my students to tutor each week despite the problems I observed. I realized that participants were students and that they were learning, but I also felt that they were causing harm.

(Marx, 2004, p. 37)

The problem became even more apparent when she met with two of her students together. During this conversation, the students expressed their beliefs about the children more openly and honestly than before, which led Marx to shift her study to how she could transform her teaching to address her students’ racism.

Marx decided that her first step was to meet the nine participating students individually rather than as a whole group. The second was to begin to firmly but gently draw attention to when the students expressed white racism in their discussions about race. She did this by giving the students the transcripts of their interviews and asking them to examine them for evidence of racism in their words. When she met with them to discuss what they had found, the students typically noted that they were affected by white racism, but that theirs was innocuous and could be controlled. Marx felt that her role was to problematize the students’ responses. Marx’s next step was to provide the students with the knowledge and skills that they needed to take on an anti-racist stance.

Marx’s article provides much more detail about her transformation from a teacher researching her students to being a teacher-researcher.

This came about because of the ethical, moral, and political interests she had in uncovering her students' beliefs about the ELL students and helping them to acknowledge and change them. One interesting aspect of this action research study is that Marx did not write about it as such. However, we found it to be a compelling example of how what we see as being important aspects of action research can arise from a critical stance toward one's practice.

Examples of participatory action research

The two examples of action research that we look at next are examples of what is usually referred to as participatory action research (PAR). We described it briefly in Chapter 3. These examples, the first of a professor specializing in palliative care work with a group of "older people," and the second of a mathematics educator working with a group of Sami teachers in Sweden, should provide you with a better understanding of what PAR is and how it can serve community needs.

Addressing end-of-life issues with older people

The book chapter, 'Addressing end-of-life issues through peer education and action research,' was co-written by Katherine Froggatt and the eight older people¹ who engaged with her in an action research group—Gail Capstick, Oliver Coles, Deidre Jacks, Susan Lockett, Irene McGill, Jill Robinson, Janet Ross-Mills, and Mary Matthiesen (2014). Although it is not necessarily a part of PAR, one of the ways in which this example of action research demonstrates its democratic nature is by recognizing all the members of the group as co-authors in the text of the chapter. However, on the title page, Froggatt is identified as the author with the eight older people. This suggests that they did not have full status as co-authors. As with most PAR, this study began with the recognition of a need felt by a community. In this case, it was to improve the public's awareness about and attitudes toward issues related to getting older and eventually dying. Katherine Froggatt, as a professor at Lancaster University where she specializes in palliative care, was aware of the governmental National End-of-Life Care program in England. The overall goal of this program is to improve the public's knowledge so that they can make better decisions about the issues that we all face as we grow older. Froggatt was also aware of an international movement in health care and social services that encourages a shift of power from professionals to individuals and their communities, and that one way to do this is through a participatory approach. As a result, she decided to convene a group of older people who would focus on the end-of-life issues in their locality for themselves and collectively. She was able to receive funding from a local health provider organization.

Although PAR is done by those most concerned about the issues being addressed, it is often instigated by an outsider who sees the need in the community. After spending some time getting to know the community and its features, the outsider then needs to somehow convene a group of community members who would be interested in engaging in action research. Froggatt first engaged with the community through a three-day training program that was attended by nine people. Eight of them along with Froggatt became the Peer Education for End-of-Life Project group. They identified two objectives. The first was to develop a personal portfolio template that individuals would be able to use to record and store resources and information to support their decision making about end-of-life issues. The second was to design and implement end-of-life workshops for older people and their advocates (Froggatt et al., 2014). They also decided to structure the group using what Froggatt et al. refer to as key principles of PAR: “working with people, rather than on them; utilizing different ways of knowing in the world” (for example, experiential and theoretical); and “bringing about a change as a result of the work” (pp. 44–45). The group met monthly for six months during which it engaged in cycles of action research that focused on the members’ own practice (being an older person) and seeking ways to bring about change.

Froggatt et al. (2014) thought of their PAR in terms of two main actions. The first was the development of the participants’ personal portfolios and a template that could be used by other older people. The process of developing the portfolio began with the group members hearing and understanding each other’s different experiences and perspectives about end-of-life issues to identify their thoughts about what ought to be included in their portfolios. They then looked for resources that went beyond their own knowledge and experience about issues like “advance care planning, mental capacity issues, bequests and post-death activities” (p. 46). These resources were reviewed for their strengths and weaknesses, and how they would help in the development of the portfolios. This then led directly into the design of the portfolio. These three steps in the process could be thought of as being the development phase. The next steps were to try out the portfolios, reflect on their usefulness, and come up with ideas about how they could be improved. This process of trying them out, reflecting on their use both individually and in the group continued for several cycles until they felt that the portfolios were useful to them and potentially for others.

The second action was to develop and implement the public workshops on end-of-life planning for older adults. The workshops began with one of the group members telling a personal story related to aging. This was followed by small group discussions facilitated by the group members. The workshop concluded with sharing of what the small groups had

discussed with the wider group. The portfolio was further revised as a result of what the group had learned from the workshop participants.

The chapter ends with the raising of the question of what criteria can be used to evaluate the success of a PAR project, and whether the Peer Education for End-of-Life Project met those criteria. The group decided to use those proposed by Reason (2007):

- The extent to which worthwhile practical purposes are addressed;
- Levels of democracy and participation;
- The different forms of knowledge engaged with during the study;
- The extent to which the research has been and continues to be responsive and developmental.

(Froggatt et al., 2014, p. 50)

Froggatt et al. demonstrate that they have in fact met each of these criteria. By examining the ways the study meets them, we would like to take a look at what these criteria mean in terms of action research in general.

The Peer Education for End-of-Life Project addressed the practical problems related to the human experiences of aging and dying. The Project addressed these through the development of the portfolio and the presentations of the workshops. This is in line with what we believe ought to be the case for all action research—the reason why it is called ACTION research is because it embeds worthwhile activities as an integral part of the research and it should lead to meaningful changes in individual practice and practice situations, and be of use to other practitioners as well as university researchers and policy makers.

On almost all levels the Project was democratic in nature and participatory. The group, which included the eight older people and the university researcher, together designed and undertook the action research study, and their meetings were structured to ensure shared responsibility. The goals of shared leadership and responsibility like those described in this chapter ought to be important aspects of any collaborative action research project. That said, there are often issues related to power differentials when university researchers work with practitioners. In this case, Froggatt is a professor at a major university. We know little of the participants other than that they are older people. While the study was done collaboratively, it was Froggatt who conceived it and convened the group, and she is identified as the author of the chapter while the participants are acknowledged to be in a secondary role. While there is not anything inherently wrong with there being power differences—in fact, it is nearly impossible to eliminate them—we believe that it is important to acknowledge them and to work hard to minimize their effects (see Feldman, 1993a).

The Peer Education for End-of-Life Project also used a variety of forms of knowledge to meet its objectives. This included the experiential

knowledge of all the participants, the propositional knowledge that they uncovered in their search for external resources related to their issues of concern, and the practical knowledge that they developed and shared through the development of the portfolio and workshops. In addition to these three forms of knowledge, Heron (1992) added a fourth—presentational knowledge. Froggatt et al. (2014) see this in the stories that they told as part of the workshops. Quality action research makes good use of the knowledge of those who engage in it. As practitioners, they have experiential knowledge based on who they are, practical knowledge that is part of what they do, and presentational knowledge in the storied lives that they live (Connelly & Clandinin, 1990). But action researchers ought not to limit themselves to these forms of knowledge—there is much to learn from the propositional knowledge that others have produced and made available through articles and other media.

Finally, the Project was responsive to the needs of older people and the communities in which they live. This should always be the case in action research if the research is done by practitioners (in this case, those engaged in the practice of being older people) and is initiated by their concerns. The Project was also developmental as the participants engaged in the cyclic nature of action research. Quality action research visits and re-visits the solutions and the problems, modifying both as the action researchers reflect on what they are doing, why they are doing it, and the effects of what they have done.

Decolonizing indigenous teaching

Our second example of PAR was published in the journal *Action Research*. It reports on work by Ylva Jannok Nutti, a faculty member at the Sámi University of Applied Sciences, in collaboration with Sámi teachers in Sweden. The Sámi are indigenous people living in the far north regions of Norway, Sweden, Finland, and Russia. In Sweden, there are Sámi schools that follow the national curriculum but are required to support the Sámi languages and culture. In a previous study, Nutti found that Sámi teachers wanted to implement culture-based teaching and, therefore, decided to engage the teachers in action research to help them achieve that objective. This study highlights a common goal of PAR, which is to work against the dominating effects of one culture over another. In this case, the development of a Sámi culture-based curriculum can be seen as an attempt to reduce the dominance of the Swedish culture and increase the sustainability of the indigenous one (Nutti, 2016).

Nutti decided to use Critical Utopian Action Research as a framework for this PAR study. Critical Utopian Action Research, which was developed by Nielsen and Aagaard Nielsen (2006), uses a democratic focus “to develop communication arenas in which a new understanding of the context can

emerge across various perspectives, from the knowledge and experiences of experts to local knowledge and everyday-life perspectives" (Nutti, 2016, p. 3). This is achieved through the use of future workshops (Jungk & Muller, 1987). A future workshop consists of three phases: the critique phase, the utopian phase, and the realization phase. The critique phase seeks to answer the question, "What's wrong?" To initiate this Nutti posed the following question to the teachers: "When critically reviewing your local teaching practice, what challenges and opportunities do you experience in practice regarding the implementation of Sámi culture-based teaching and the obligation to take into account and develop the Sámi language and cultural heritage?" (Nutti, 2016, p. 8). The teachers responded that they felt trapped between the demands made by the national curriculum and their desire to implement Sámi culture-based teaching. This was due in part to the teachers' desire to best prepare their students for the national exams, which are a passport to further schooling. They felt that the Sámi curriculum was too time-consuming, which prevented them from doing what they felt best for their students' future. Other problems and tensions were discussed, and the outcome of the critique phase was for the teachers to identify the challenges that they faced in implementing a Sámi culture-based curriculum.

In the utopian phase, the teachers envisioned and discussed their "dream Sámi school" in the context of the subject area that is the focus of Nutti's work: mathematics. Their dream school would help pass Sámi culture-based knowledge to young people, it would include the participation and wisdom of the community elders, it would build upon students' everyday experiences as Sámis, and it would incorporate the students' voice in the development of the curriculum materials (Nutti, 2016).

The purpose of the realization phase is to turn dreams into reality. The teachers did this by seeking knowledge in addition to their professional, practical, and experiential knowledge. One source was the field of ethnomathematics, which Nutti introduced to the teachers. The existence of an academic field that recognized the mathematics of indigenous people helped legitimate for the teachers the inclusion of the use of Sámi culture in the teaching and learning of mathematics. Nutti also arranged for a workshop by researchers from the Math in a Cultural Context project (Lipka, Mohatt, & the Ciulistet Group, 1998). This project used ethnomathematics to develop curriculum materials for indigenous students in Alaska. The workshop provided the Sámi teachers with examples of how this was done, and generated ideas of how the types of activities developed for Alaska natives could be modified for their students. The teachers also sought knowledge from parents, grandparents, and elders about the Sámi culture and ways that they thought it could be incorporated into the teaching of mathematics. These varied sources enabled the teachers to build a knowledge exchange that "functioned as a social learning arena for both the pupils and the teachers" (Nutti, 2016, p. 18).

As is typical with PAR, there were outcomes for the participants and outcomes for the community that went hand-in-hand. The tension that the teachers had felt between the need to teach the national curriculum and their desire to incorporate Sámi culture-based curriculum was relieved by the development of the new curriculum materials, which also served to strengthen the community's longing to continue their cultural heritage to future generations. By seeking ways to incorporate Sámi culture in their teaching, the teachers rediscovered and recovered their traditional knowledge in the context of formal schooling. This also served the community's need by lessening the gap between the state school and them. This gap was also lessened because the teachers sought out the family members and elders as collaborators, which placed both the teachers and pupils in the role of learners.

We end our look at examples of PAR by noting some of the differences between PAR and the conception of action research as presented through much of this book. One of the most important differences is the role of the outsider researcher. In our vision of action research, there is not necessarily an outsider. Individual practitioners or groups of practitioners can engage in action research studies without an outsider to initiate it or facilitate it. In many, if not most, examples of PAR, there is an outsider who has both research and domain-specific expertise who collaborates with participants to initiate and facilitate the action research. We saw this in both examples that we presented here. In the first, Froggatt provided her expertise in research and palliative care to convene a group of older people to work on a problem that she had identified. While it was and is a problem of importance for both the older people and the communities in which they reside, the PAR would not have happened without Froggatt. Similarly, while it may have been possible for the Sámi teachers to develop the curriculum materials without Nutti, she was the one who came to the school seeking teachers who would collaborate with her in her interest in ethnomathematics as a way to support the Sámi culture, which she shares.

A second difference between PAR and our conception of action research is that it is typical in the former for the participants to be part of a community or social group that is in some way oppressed, persecuted, or repressed. We see this in both examples that we looked at here. In many Western countries, older people are seen as second-class citizens. Because many are past their prime, are no longer participating in the workforce, and often segregate themselves in retirement communities, they find themselves on the periphery of society. In addition, many have low or limited incomes because they were not able to put aside enough funds for retirement because of low wages when they were employed and/or because their governments do not adequately support retirees.

As a result, older people as a class have characteristics that are similar to those who are oppressed, persecuted, or repressed. The situation for the Sámi as indigenous people, living traditional lifestyles, speaking a language different from those of the majority, and devoid of a national state because their ancestral lands have been split among Norway, Sweden, Finland, and Russia makes it much easier to see how they can be classified among the oppressed. The connection between PAR and the types of communities that it serves helps us understand why it is so often associated with critical pedagogy (Freire, 1989; Gore, 1993) and critical action research (Carr & Kemmis, 1986; Kemmis, McTaggart, & Nixon, 2014).

Self-studies

As we noted in Chapter 3, there is a large movement in support of this in the field of teacher education that goes by the name “self-study of teacher education practices” (S-STEP) (see, for example, Loughran, Hamilton, LaBoskey, & Russell, 2004, and the journal *Studying Teacher Education*). We provide two examples of self-study—the first in an unpublished study by Geitza Rebolledo (2017)², and a second that appeared in *Studying Teacher Education*.

How do I improve what I do?

Rebolledo has been teaching a curriculum course for more than 20 years to undergraduate teacher education students at the Universidad Pedagógica Experimental Libertador Pedagogic Institute (UPEL-IPC) in Caracas, Venezuela. The course has a mix of students preparing to teach a variety of school subjects including Spanish language, biology, chemistry, sports education, computing, math, and physics. The second class session was a workshop on reflective practice. Rebolledo found that the language some students engaged in was the type of reflective writing that she expected from students in their sixth of ten semesters of studies. However, the other students were at a loss as to what she expected of them. For example, when she asked them what it means to reflect, they were not at all familiar with what she meant by that. They told her that in their courses they were typically asked to remember, to come to a conclusion, to think about what something means, to interpret or to reason about something. Missing was any experience engaging in philosophical musings or engaging in ethical questions, or the expression of feelings.

In order to provide her students with the opportunity to experience reflection, Rebolledo used a technique developed by McIntosh (2010) in which students are asked for their feelings and perceived ethical aspects

in response to a series of pictures. The students first did this individually and then in a whole class discussion. Again, she found that only a few students opened themselves to talking about the feelings that the images engendered, and only two expressed critical opinions of the photographs. From this, Rebolledo concluded that the majority of her students had been taught to write using an impersonal manner, and had not had the opportunity to use interpretative qualitative approaches. However, it was clear to her that the students valued the discussions about the pictures.

As a result of paying close attention to her teaching, Rebolledo found that she needed to provide the students with multiple opportunities to engage in dialogues among themselves and with her. Although previously she had believed that her classes were “democratic and open,” she now realized that her students were not perceiving it as such, and that she needed to move from being a judge to being a mentor. To do this required her to construct the conditions in her classes that would involve her and her students with one another respectfully and dialogically. This included making sure that she interacted with the students in a way that was open and democratic. However, in her self-study, she found that although she had previously believed that was what she was doing, the students did not perceive her actions as open and democratic. Therefore, she found that she needed to listen more closely to her students by encouraging them to reflect critically about the course. In order for them to do this, she needed both to teach them how to reflect in this way and to develop a classroom climate of trust so that their reflections would be honest.

Studying the self as teacher and learner

Much of what is published under the rubric as self-study is concerned with the study of the practice of teacher education by teacher educators. One of the first self-studies published in the journal *Studying Teacher Education* was done by a high school English teacher in the US (Senese, 2005). Joseph Senese had been involved in action research for a number of years when he began to engage in self-study. As such, he had been paying close attention to his teaching in order to improve it and to come to a better understanding of it. This article describes what he learned from reviewing five years of grade 12 students’ reflections on the classes that they took with him.

Senese saw himself as a constructivist teacher. He explained what this meant, describing his teaching practice as “no quizzes or tests, no grades, conferences with the teacher, publication of all work” (Senese, 2005, p. 46) and his goal for his students to learn to become independent and self-directed learners. He even had the students co-design a course in British literature that they were taking with him. In the article, Senese describes this process and provides details of the other classes that he

taught during those five years. As part of his constructivist approach, he asked the students to provide him with their thoughts and reflections about their learning and class, but not his teaching, four times a year. He realized that these reflections provided him with the opportunity to look longitudinally at his teaching to answer the question, "What do quarterly self-reflections of the students tell me about what they are learning in English Class?" (p. 44), including any unintended outcomes, what had not been learned, and what assumptions the students had about learning and teaching in school.

Senese's method of data analysis was quite straightforward—he read and re-read the hundreds of student reflections. He immersed himself in them by reading through them in chronological order, taking notes as he read. From this, he uncovered several themes. One that Senese discovered was the significance of a sense of community among his students. He found in their reflections that they saw themselves as a group or a team, and that many commented on having both an identity connected to the class and a feeling of responsibility to the class. He found that one of the reasons for this was an assignment that one of the other teachers created that he agreed to use with his classes. While he had often met with students individually about their writing for the course, this assignment was centered on the personal essays that they were writing for their college applications. Senese found that in order to help them with these he had to get to know them better. He found that this helped to engender a relationship with every student: "I got to know them as individuals and expressed genuine interest in who they were. They, in turn, could see me as someone who needed to learn about them" (Senese, 2005, p. 50). Related to this is another theme—students learned more deeply with realistic learning experiences. For the most part, these experiences consisted of choosing for themselves what to read for the course. But to do this, they engaged in conversations with their peers as well as others in their wider community, including other teachers, their parents, their siblings, and librarians. This resulted in the students taking more responsibility for their own learning and at times for their classmates.

Both of the themes above were what he learned about the students in terms of the dynamics of the class and their ownership of their learning. However, as a self-study, Senese also asked about his role as a teacher. In the article, he recounts a story of an exchange with one of his students, Susie, at the end of the term. Susie told him that she had not learned much in the class. Senese reminded her of all that she had accomplished in her study of *The Taming of the Shrew*, including reading it, listening to a recording of it, watching a film of it, and performing a reader's theater of it with her father. Susie's response was that none of this had been assigned to her by Senese, and that no one else in the class had to do them either. When this first happened, Senese felt that Susie just didn't get what it means to

be a self-directed learner. But as a result of his going to the students' comments five years later, he came to realize that she considered him as the authority in the class and that he had not done his job as a teacher: "Reading these comments three years later alerted me to the fact that, as much as I convinced myself that I had liberated these students, I still was exercising control because of my position of authority" (Senese, 2005, p. 49).

Senese labeled the fourth theme as "Acting as both a learner and a teacher" (Senese, 2005, p. 51). However, in reading that section of his article, it appears that a more apt section title would be "Relinquish control in order to gain influence" (Senese, 2002). In his 2002 book chapter, he meant that teachers need to reduce and limit the ways that they control their students in order to motivate and inspire them. As a result of this self-study, he realized that he needed to relinquish control not only to influence the students, but also to gain understanding of his students and his teaching. He put this quite eloquently:

I am finally realizing that in order to create the kinds of relationships that foster true, authentic, and real learning, teachers must relinquish control of themselves. The position of "teacher" does not automatically make someone a teacher. By assuming some of the risk in the classroom as a true learner, I ultimately liberated students in order that they might see themselves as both teachers and learners while simultaneously liberating myself to become a learner.

(Senese, 2005, p. 52)

Action research for professional development

Action research with chemistry teachers

Israeli educators have worked for a number of years to engage science teachers in continuous professional development (see, for example, Eylon, Berger, & Bagno, 2008; Taitelbaum, Mamlok-Naaman, Carmeli, & Hofstein, 2008). One way that they have done this is by engaging teachers in action research. Rachel Mamlok-Naaman (2014) has reported on the work that she has done engaging high school chemistry teachers in action research on their practice. The decision to use action research for this purpose was based on the following assumptions:

- Teachers are highly qualified individuals with expertise and experiences that are central to the improvement of educational practice.
 - By formulating their own questions and by collecting and analyzing data to answer these questions, teachers grow professionally.
 - Teachers are motivated to use more effective practices when they are continuously investigating the results of their action in the classroom.
- (Loucks-Horsley, Hewson, Love, & Stiles, 1998, p. 97)

Given this, Mamlok-Naaman saw action research as a way to enhance the teachers' expertise by having them begin by choosing a research topic for a small study in their school setting, and by creating a professional community of chemistry teachers in the country. In addition, action research was seen as a way to develop a cadre of lead teachers who would go back to their schools and carry out action research with their colleagues. The 22 teachers were introduced to action research and its methods in a series of workshops facilitated by Mamlok-Naaman, a science education researcher at the Weizmann Institute. Teachers selected topics such as how their students understood chemistry concepts, ways to improve student behavior or motivation, and how to improve their own teaching.

In her chapter, Mamlok-Naaman presents examples from the work of two teachers, Sarah and Debra, who asked this research question: "What misconceptions do students have about electrical conductivity of metals and ionic materials, and how can we cope with them?" They decided to address this question because they were "appalled by what they felt was an apparent lack of knowledge and understanding of subjects that the students had already studied [in previous years]" (p. 182). As part of the workshops Sarah and Debra employed the traditional model of action research: identifying a problem, planning, collecting and analyzing data, implementing new method, collecting and analyzing more data, and evaluating and reflecting.

Sarah and Debra began by interviewing nine students, three each of low, intermediate, and high achievers, about their content knowledge. By analyzing the interviews, the teachers identified which concepts the students had difficulty understanding and used that to take a new approach in their teaching. This included the use of models, videos, and educational software, including computer animations. After implementing these changes, they collected data of their effects through a content post-test and follow-up interviews of the same students. Sarah and Debra found that the students gained content knowledge about electrochemistry and developed the ability to use models for reasoning. They also found that some students had not changed their misconceptions, and therefore Sarah decided to engage in another cycle of action research.

It should be clear from the summary above of Sarah's and Debra's action research studies that they had improved their practice. However, Mamlok-Naaman was interested in knowing what the effect of engaging in action research was on the other 20 teachers and its usefulness as a form of continuing professional development. Although she does not present it in this way, in effect she was engaging in second-order action research, that is, action research on action research (Elliott, 1988). She identified a problem of practice—how best to engage teachers in continuous professional development (CPD); engaged in planning and researching the issue; implemented the action research workshops; and collected data to determine CPD's effectiveness and ways to improve her practice as a facilitator

of action research. Her data included an attitudinal survey, follow-up interviews of the teachers, and the teachers' action research reports. The most immediate outcome was that the teachers improved their practice by becoming better at understanding their students and how they think. In addition, she found that the teachers learned how to engage in reflective practice through action research and to make appropriate changes. She also found that they developed a professional community that extended past the end of the workshops in which the teachers exchanged information with one another. Finally, by engaging in action research, some of the teachers had developed the skills and knowledge that would allow them to be lead teachers who could facilitate their colleagues' action research and develop their professional abilities and research interests.

Transition from high school to community college

Our final example comes from an innovative platform for making action research public: Social Publishers Foundation (<https://www.social-publishersfoundation.org>). Social Publishers Foundation has as its mission "to provide educational activities and funding opportunities for practitioner-research and action research projects for improved social welfare and educational practices within communities around the world" (Social Publishers Foundation, 2017). It is establishing a global non-profit network of practitioner researchers who are committed to improving the conditions of people through work in education, health care, youth and family service, and community development. The Foundation also provides small grants for practitioner research and aids in developing funding through crowd-sourcing.

Daniela Azuela, Becky May, and Rina Ortega are school counselors and English Language Development Specialists at a high school in Fremont, California (Azuela et al., 2017). Many of the students whom they work with are ELLs and/or immigrants to the US. Because of the students' marginalized status in the schools, they are not prepared to go directly from secondary school to bachelor's degree-granting institutions such as the various University of California or California State University campuses. Instead, they begin higher education in community colleges. In the US, community colleges are two-year public institutions that provide certificates, career training, and the equivalent of the first two years of a bachelor's degree. The latter track typically results in the granting of an associate degree. Many community colleges have articulation agreements with state-supported universities that allow students guaranteed admission to the bachelor's degree program, with the expectation that they would be able to complete that degree in two or three additional years. Most community colleges have open-admission policies for anyone who has a high school diploma. In addition, community college

tuition is usually significantly lower in cost than that of the bachelor's degree-granting institutions. Therefore, community colleges are a common route into higher education for students who have not done well enough to be admitted directly to university, or do not have the funds to pay for the higher costs.

Even though community college is a more accessible route to higher education than university, many students have difficulty completing the associate degree. This is especially the case for ELL students. Therefore, Azuela, May, and Ortega decided to "examine how many ELLs who are also Latina/o are not [university] eligible and whether they could benefit from an increased awareness of college preparedness by participating in a transitional program focused on community college" (Azuela et al., 2017). They gathered data to examine the barriers that the ELL students faced and developed a support system based on the problem areas that they identified. They did this through guidance lessons, information and practice for filling out online applications to the community colleges, and group discussions about the community college experience.

During the 2016–2017 academic year the team worked with 15 ELL Latina/o seniors at their high school, including two who were not eligible to graduate that year. Five were males and ten were females, all ages 17–18 years. None of them was eligible to attend four-year universities based on their transcripts. Overall, the effects of the team's intervention were very positive.

At the beginning of the program, four seniors planned on taking a year off after high school including one senior who decided to take a year off because he did not qualify for financial aid. By the end of the program, 100% of students had established an educational goal, that is, obtaining a certificate, associate's degree and/or transfer to a four-year university.

(Azuela et al., 2017)

We included this example in our book because it shows how a small group of practitioners can collaborate to produce significant changes in the lives of their students. It began by Azuela identifying a problem that went beyond her immediate job description (teaching English to ELLs) and her finding like-minded colleagues who were willing to go beyond the ordinary. They were helped by a small grant that they received from Social Publishers Foundation, but most likely they would have been able to do this without the additional funding. We also included it because it demonstrates the importance of making action research public. Azuela, May, and Ortega's report is now available to the whole world through the Social Publishers Foundation's website and can be found by searching for "transition from high school to community college."

Coda

In music, the coda is an occasional additional musical reflection that comes at the end in order to remind listeners of key themes raised in the main body of the work. Here we want to encourage you to reflect back on this chapter rather as you might at the end of a musical performance. We have not so much been presenting our own ideas in this chapter as giving performances of works composed by others. Different performers would be likely to give very different performances of the same works—and possibly give them much fairer and more interesting renderings. We encourage you to find the time to read the original articles so that you can judge that for yourselves. But, reflecting back on the articles as we have presented them, with all the inadequacies of our presentation, we hope you will sit for a moment and reflect back on the enormous range of kinds of action research and locations for action research revealed in just eight articles. All start from a vision of transforming social practices through grounding change and development in locally generated knowledge. The researchers either are participants in the social situation under investigation or work alongside the participants as co-researchers: the aim is for equality of esteem and mutual support among all those involved, whatever their role or responsibilities. They are concerned with developing practical theories that can be fed back and tested in practice, and to varying extents they set out to understand and address issues of power, politics, and ideology. Their orientation is toward deepening understanding of problems, developing a vision of what is possible, and taking action to improve the quality of professional practice. Action research is indeed a powerful approach to research capable of adapting to the needs of a very wide range of situations and projects. In the next chapter, we present some key theories that inform our understanding of action research methodology, but this chapter is a reminder that action research should never be reduced to a narrow orthodoxy. What is important is that you approach the writing of other action researchers with an open mind to learn from their experience and the knowledge they have generated about learning and change. This is the first step in going on to writing with confidence about your own action research as a contribution to public knowledge about the complexities of practice.

Notes

- 1 The term “older people” is used in the UK to refer to those over 50 years of age.
- 2 For a published account of part of this study see Rebolledo, Requena, and Menlendez (2014).

Behind the scenes

A theoretical foundation of action research

Much of what has come before here in this book has been methods and techniques for doing action research. We provided a brief introduction to this methodology in Chapter 1, and added some background and theoretical asides in the other chapters. Now that we are nearing the end of the book, we invite you to join us as we delve deeper into the origins of action research and how it has evolved over the past 100 years.

The roots of action research

Recently, Allan wrote a chapter for *The Palgrave International Handbook of Action Research* that was titled, 'An Emergent History of Educational Action Research in the English-Speaking World' (Feldman, 2017). He gave it that title because what we think of as the history of action research changes along with our understanding of it and, because as an Anglophone, he was limited to literature written in English. Many of the changes made to this section of Chapter 10 for the third edition draw on the work that Allan did in writing the chapter in the *Handbook*.

The “standard” story

It has become the standard story that action research began with the work of Kurt Lewin in the 1930s and 1940s in the US. Lewin was a Jewish refugee from Nazi Germany who had worked with members of the Frankfurt School (Jay, 1973). In the US, he found work with the Iowa Child Welfare Station (Noffke, 1990), the Commission on Community Interrelations (Marrow, 1964), and the National Training Laboratory (Marrow, 1967). Lewin described his work with these organizations as democratic forces for change, and in terms of group dynamics.

Lewin's first published use of the term action research was in his article 'Action Research and Minority Problems' (1946). His conception of action research began with the taking of actions, collecting data about the effects of those actions, and then evaluating them (Noffke, 1990). He described this as a cyclical process, as illustrated in Figure 10.1.

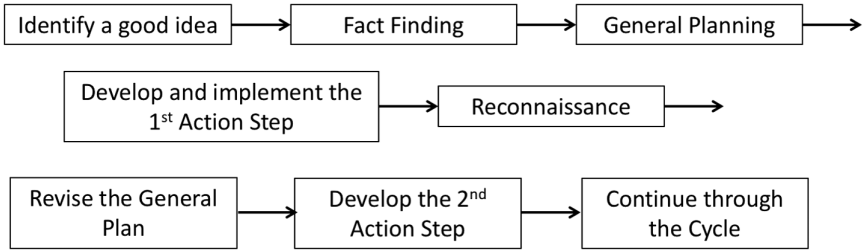


Figure 10.1 Diagram of Lewin's conception of the action research cycle.

It is important to note that to Lewin, action research was “a comparative research on the conditions and effects of various forms of social action, and research leading to social action” (Lewin, 1946, p. 35). From the middle of the 1940s he tried to implement this type of research in projects, such as the improvement of intergroup relations (Lewin, 1946) or nutrition practices (Lewin, 1988). It is possible that Lewin's devotion to social justice came from both his experience with the members of the Frankfurt School and the fact that he left Germany as a member of an oppressed group and then came to the US during the depths of the Great Depression. He was also aided by the Roosevelt administration's commitment to social experimentation.

The other players

While Lewin is the one most cited as the originator of action research, as is almost always the case, it did not spring forth from a vacuum. Lewin's idea of action research was very much a part of his times, as well as related to and drawing upon the work of others. John Dewey had written in 1929 that teachers can and ought to contribute to research efforts on teaching and learning (1929). A few years earlier, Buckingham had published the book *Research for Teachers* (Buckingham, 1926).

In Anglo-American literature, the development of the concept “action research” is traced back to the work of John Collier, US Commissioner of Indian Affairs, and Jacob L. Moreno, a physician, social philosopher, and poet (Feldman, 2017; Gunz, 1996; Noffke, 1990). Collier (1945), in his role as commissioner, worked from 1933 to 1945 to improve the conditions of life of the American Indian population by using an applied anthropology that was socially conscious and related to practice.¹ Moreno was the inventor of theoretical concepts such as sociometry, psychodrama, and role-play. He also was probably the first person to use concepts such as “interaction” or “action research” and who insisted on principles such as participant observation, participation of lay persons in research, and social improvement as an aim of research (Boog, 2003; Gunz, 1996). It is interesting to

note that there is evidence that Dewey, Collier, and Lewin interacted with one another (Adelman, 1993; Noffke, 1989) and that Moreno moved in the same circles.

The history of action research in the US typically then moves on to the work of Stephen Corey of Teachers College, Columbia University. However, when he arrived there in 1948 the Horace Mann-Lincoln Institute for School Improvement had been engaged in action research for five years (Goodson, 1946; Mackenzie, 1946). That said, Corey was instrumental in popularizing action research, but in a way that was more technical and problem solving and with less of a social justice focus than that conceived by Lewin, Collier, or Moreno (Corey, 1949).

By the early 1970s action research was in decline in the US and elsewhere. One reason for this was the move made by Corey and others to make action research more “scientific.” This was most likely in response to the growing influence of positivism in the social sciences. Arthur Foshay, who was part of the Horace Mann-Lincoln Institute, wrote about this in a retrospective article:

The chief limitation of cooperative action research, from the point of view of the educational researchers of that time, was that it was not possible to generalize from the examined population to others, because no attempt was made to see whether the examined population was representative of a larger population. What was reported was, essentially, case material. In addition, since much of the research was designed and carried out by classroom teachers, who usually are not trained in research, the data often were flawed. For these reasons, the movement was ridiculed in the publications of the American Educational Research Association (AERA), and it did not spread. It disappeared as the members of the [Horace Mann-Lincoln] Institute staff scattered with the passage of time.

(Foshay, 1994, p. 320)

In short, when action research attempted to be “scientific,” it did not meet the criteria for the scientific educational research of its time.

There is at least one other possible cause for the decline of action research during this time period. Action research was born in the US during a time of great social experimentation for increasing democracy and working against poverty. The post-war period in the US was a time of fervent anti-communism and anti-socialism that demonized activities, such as action research, that were associated in any way with those ideologies. This could have prompted Corey to play down action research as a force for social justice. Similarly, action research in other regions, such as Latin America, may have been limited by the power held by right-wing regimes (Dinan & Garcia, 1997; Fals-Borda, 1997; Saez Brezmes, 1997).

Is action research “research”?

Before continuing with our brief history of action research, we would like to address the criticism that action research is not a legitimate form of research. That action research either is not research or is some type of “junior” research was argued as early as 1957. In his influential piece, Hodgkinson (1957) argued that action research was not real research because its practitioners—in this case, teachers and administrators—lacked training in research methods, were not familiar with the research literature, had little time to engage in research activities, and were not members of research organizations like the American Educational Research Association (AERA). In addition, Hodgkinson quoted proponents of action research who described its goal as to develop middle-ground principles rather than theory. He concluded that if the goal of action research is not to produce theory, then it should not be considered research.

Much has changed since then with a plethora of new and different research methodologies based on a variety of ontological and epistemological positions that challenge positivism, which was once the dominant conception of research (for example, Crotty, 1998; Lather, 2006; Paul, 2005; Phillips & Burbules, 2000). However, much of this literature relates to research done by academicians rather than practitioner research. If we look at a list of some of the contemporary goals for action research, which comes from the work of Elliott, Stenhouse, and others, we see that they tend to focus on the development of practitioners, and the improvement of practice and practice situations, with the advancement of research being seen as an add on:

- In-service training of practitioners, who improve their “practical theories” and their action competence through reflection and action;
- Improvements in the practical situation under research, by developing the quality of teaching and learning through new and sustainable action strategies;
- Collective development of the profession by means of opening up individual practical knowledge to scrutiny and discussion and thus broadening the knowledge base of the profession;
- The advancement of educational research.

As a result, we still see the criticism of action research that it is not a legitimate form of research in statements such as:

- Practitioners are involved in action to such an extent that they are unable to attain the critical distance that is characteristic of research.
- The quality criteria of traditional research cannot be achieved if laypersons do the research.

- Action research leads to singular statements and not to statements of general validity common in traditional research.

One of the ways in which these types of criticisms are countered is by encouraging the partnership of practitioners with academic researchers. When these types of partnerships are established, care needs to be taken to negate the usual hierarchical relationships between academic researchers and practitioners as unjustified and disadvantageous (Feldman, 1993a). Action research calls for a democratization of social science. It places those who usually are only objects of research on an equal footing with academic researchers and treats them as reflecting subjects who contribute to research on equal terms. The theory that results from action research is meaningful for practitioners because it is rooted in their sense of self and in their practice.

Another way to respond to the arguments that action research is not a legitimate form of research is to abandon that goal. This is what is happening in what Allan had called Era 3 action research (Feldman, 2017). Era 3 action research has the characteristics of technical problem solving. Its proponents use formulaic language to describe the action research process that lacks attention to social justice aims. Some even reject the term research completely and replace it with inquiry or an inquiry stance (for example, Dana & Yendol-Hoppey, 2014; Gray, 2013; Vanderlinde & van Braak, 2009).

Clearly, we do not want to reject those aspects of action research that lead to a greater understanding of practice and practice situations that can be shared with and be open to scrutiny by both practitioners and academicians. Nor do we want to reject the social justice aims of action research. Therefore, we believe it is important to respond seriously to those who argue against the legitimacy of action research. We have done so elsewhere (Altrichter, 1986b, 1990; Feldman, 1994, 2003, 2007, 2009, 2014) with the following results:

- Arguments like lack of distance, quality criteria, and generalization are critical arguments that determine the usefulness and soundness of research results. Action researchers who want to increase the quality of their research are well advised to take them seriously.
- Research designs that are able to eliminate all these critical points from the outset do not exist. Using the concept “validity,” for example, we have shown that an examination of the quality of traditional research leads to relative and provisional results (Altrichter, 1986b; Feldman, 2003, 2007).
- There are straightforward ways to respond to these criticisms, as we have shown in the section on ‘criteria for guiding the quality of action research’ in Chapter 5.

- Neither the methods used in action research nor the fact that action researchers are “part-time” researchers allows others to devalue its quality conclusively. The results of action research as well as the products of other research approaches have to be examined by means of quality criteria and by critical public discussion in order to ascertain that they have been obtained with care and reflection and that they stimulate further research and further practical action.

Action research as educational innovation

By the late 1970s action research began to take root in the fertile soil of East Anglia in the UK with the work of Lawrence Stenhouse and his colleagues. Stenhouse was Professor of Education at the University of East Anglia in Norwich until his death in 1982. It was during the time that he was the initiator and driving force behind the Humanities Curriculum Project (HCP)² that he developed his ideas about the role of practitioners in the development and implementation of curriculum. Prior to the HCP the common strategy of instructional innovation was based on the classical Research-Development-Dissemination (RDD) model. On the basis of scientific knowledge (“research”) researchers developed new instructional procedures and tested them (“development”). When the materials appeared to be technically mature they were handed over to practitioners (“dissemination”) who were expected to apply them according to the intentions and specifications of the developers. In such projects, it was observed again and again that the uses teachers made of the curricular materials were often far from the intentions of the researchers. Common explanations of these phenomena were that the teachers were not competent enough to implement the curricula properly or that they were “obstructionists” who “resisted” innovation.

Stenhouse (1975) developed another interpretation of this situation: what had appeared as distortion was the result of the pragmatic skepticism of practitioners, and in fact was a kind of questioning, modifying, probing—in short, an impulse toward research. Stenhouse concluded that if one wants to introduce an innovation one should not try to dodge or eliminate this pragmatic skepticism, but incorporate it in a constructive manner. Quality in implementing an innovation is not achieved by asking practitioners to put its ideas—which may have been successful somewhere else—into action one to one. Rather, they should carefully observe the fit of the innovation with the specific conditions of their own practice. They should evaluate and modify the innovation as necessary. If innovations are developed, practitioners should not be regarded as technical operators applying prefabricated products. Rather, they should be seen as partners in a development process. With this, the idea of “teachers as researchers” was born (Elliott, 1988; Stenhouse, 1975). The Ford Teaching

Project (2101991) and the TIQL Project mentioned in Chapter 1 of this book carried forward the tradition of Stenhouse, and Bridget, one of the authors of this book and a student of Elliott, was closely involved in its further development through a number of projects investigating the ways in which practitioner researchers played a leading role in the process of innovation in different educational contexts (Somekh, 2006).

Varieties of action research

While this book continues in the tradition of action research originated by Stenhouse and his colleagues, there are other varieties of practitioner research that share some of its same qualities. The differences often build on epistemological and ontological assumptions. For example, Carr and Kemmis (1986) assume that access to knowledge is constrained by the operation of power and privilege in societies, so they categorize action research according to its function of enlightening and empowering the researcher. “Technical” action research, which focuses on seeking solutions to relatively simple problems, is therefore of less value than “practical” action research, which focuses on improving practice (but without engaging with the ideological constraints that shape it); and “critical” or “emancipatory” action research is seen as having a higher value than either of the others because it problematizes assumptions about knowledge and reality and seeks to challenge oppressive social structures and create conditions for a socially just society.

Critical action research has its roots in critical theory. Critical theory had its origins in the Frankfurt School in the 1930s, with its first use generally credited to Max Horkheimer (Jay, 1973). There are few succinct explanations of what makes a theory critical rather than traditional. Here is one that we find useful:

A “critical theory” has a distinctive aim: to unmask the ideology falsely justifying some form of social or economic oppression—to reveal it as ideology—and, in so doing, to contribute to the task of ending that oppression. And so, a critical theory aims to provide a kind of enlightenment about social and economic life that is itself emancipatory: persons come to recognize the oppression they are suffering as oppression and are thereby partly freed from it.

(Koltonski, 2014)

There are at least two varieties of critical action research: community-based participatory research (for example, Fals Borda & Rahman, 1991; Freire, 1989), and what is simply called critical action research, which is within the focus of this book. It had its origins at Deakin University in Australia in the 1980s (Carr & Kemmis, 1986; Grundy, 1987; Kemmis, McTaggart, &

Nixon, 2014). Kemmis et al. (2014, p. 20) provide the following definition of critical action research:

A social process of collaborative learning for the sake of individual and collective self-formation, realised by groups of people who join together in changing the practices through which they interact in a shared social world—a shared social world in which, for better or for worse, we live with the consequences of one another’s actions.

What makes it critical is that it rejects the idea that the researcher should be objective and replaces it with critical self-reflection in which the researchers, either as individuals or in groups, make problematic their practice and its effects, how they understand their practices, and their practice situations. The purpose of critical self-reflection is ultimately to take actions that lead to the emancipation of “people and groups from irrationality, unsustainability, and injustice”.

(Kemmis et al., 2014, p. 14)

In their book, *Becoming Critical*, Carr and Kemmis provided a model of the action research cycle illustrated in Figure 10.2.

While the steps in this action research cycle are labeled like in other diagrams (see Figures 1.1, 10.1, and 10.3 in this volume), Carr and Kemmis describe them as either constructive (planning and acting) or reconstructive (observing and reflecting). The idea of reconstruction is derived from the basis of this model in critical theory. Similarly, the ideas of locating, planning, and reflection in discourse, and action and observation in the social context, build upon the critical theorist’s goal to have people join together to critique and change the social context of practice. Carr and

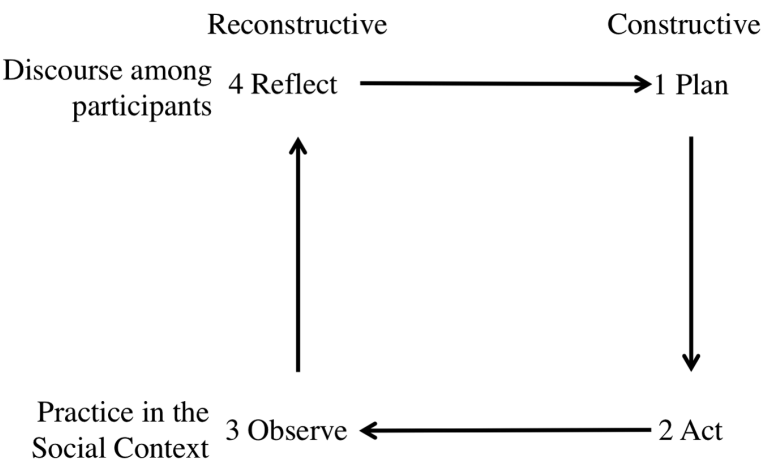


Figure 10.2 Redrawn from Carr and Kemmis’ model of critical action research (1986).

Kemmis agree with us that action research is a spiral, iterative process, as shown in Figure 10.3.

While critical action research has a clear focus on its emancipatory features, other action research scholars, including Elliott (2005a) and the authors of this book, give a high priority to engagement with practice and practical problem solving, and reject the idea that professionals such as teachers are unable to engage in critical reflection and be effective agents for change without first being empowered. Elliott argues that teachers do not need to be liberated from oppression, but are able to generate knowledge and understanding of their practices through engaging in systematic research and reflection: "Practical traditions are dynamic and changing in response to internal critique" (Elliott, 2005a, p. 367).

Noffke's (1997) three "dimensions" of action research—"political," "personal," and "professional"—provide yet another typology of action research, and are useful because they do not imply any hierarchy of status. They provide a useful tool for characterizing the differences between the kinds of action research carried out by groups within different cultures and contexts. For example, action research carried out in situations where there are serious disparities between the rich and the poor, or where some sections of the population are systematically discriminated against by a colonial power, is more likely to have a strong political motivation; and action research carried out under the auspices of university programs leading to academic accreditation is more likely to have a personal development or professional orientation.

Before leaving this brief history of action research, we believe that it is important to acknowledge a parallel teacher research movement that developed in the US during the same time period (Feldman, 2017).

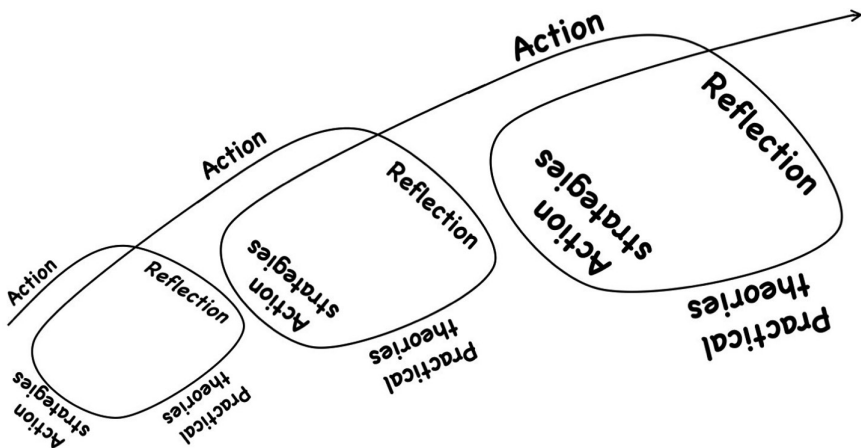


Figure 10.3 From action to reflection and back again.

This movement arose from the work of the Writing Projects (National Writing Project, 2015) and of the Prospect School (Carini, 1986). The purpose of the Writing Projects, which are spread throughout the US but originated at the University of California at Berkeley, is to improve the teaching and learning of writing. Members of the Writing Projects engage in teacher research by paying close attention to their own work through journal keeping, and by paying close attention to children's work by collecting samples of their writing. Teachers in these collaborative groups then share and critique each other's work by making public their journal entries and exhibiting their students' writing. They expand upon their ideas by writing self-reflective documents that rely on their journals, the student writing samples, and the comments and questions of their peers. These documents are shared again with the collaborative group in a peer review process. This latter process may be repeated several times until there is an acceptable finished product. We tend to think of this variety of action research as "writing as research."

Much of the early work in action research by Cochran-Smith and Lytle had its origin in the writing as research variety of practitioner research (1993). More recently they have been writing about this as "inquiry as stance" (Cochran-Smith & Lytle, 2009). They describe inquiry as stance in this way:

To call inquiry a "stance" is to regard inquiry as a worldview, a critical habit of mind, a dynamic and fluid way of knowing and being in the world of educational practice that carries across professional careers and educational settings ... Fundamental to inquiry as stance is the idea that educational practice is not simply instrumental in the sense of figuring out how to get things done, but also (and more importantly), it is social and political in the sense of deliberating about what gets done, why to get it done, who decides, and whose interests are served.

(Cochran-Smith & Lytle, 2011, p. 20)

They conceptualize it as being based on three foundational ideas. The first is that it is a theory of action grounded in practice and practitioners working together to construct theory, inquiry together, and act on those problems, dilemmas, or dissonances in their practice that are in the best interest of their students, their communities, and themselves. The second is that it is counterhegemonic. That is, to conceptualize inquiry as stance is to act against the power structure that has defined to be educated as doing well on standardized examinations. Finally, inquiry as stance "assumes that the knowledge and expertise needed to transform teaching and learning resides in the questions, theories, and strategies generated by practitioners and in their interrogations of the knowledge, practices, and theories of

others" (p. 20). As one reads Cochran-Smith and Lytle's argument for this view, it becomes clear that part of their purpose is to counter the models of practitioner research that are part of the accountability movement (for example, see professional learning communities described in Chapter 3).

Practitioners as members of a profession

The idea of teachers, nurses, social workers, and other practitioners engaging in action research is not just a strategic idea to reduce frictions when implementing innovations. Instead, it implies a different self-concept of what it means to be members of a profession. The *Oxford English Dictionary* defines profession as:

An occupation in which a professed knowledge of some subject, field, or science is applied; a vocation or career, especially one that involves prolonged training and a formal qualification.

(*Oxford English Dictionary*, 2007)

This definition suggests that the hallmark of a profession is that it is the application of received knowledge. Action research rejects this static view of what constitutes professional practice and replaces it with the requirement that those who are engaged in professional practice have the ability to generate and further develop knowledge of the field, including one's practice and practice situation, which can then be shared with others. As Stenhouse noted more than 40 years ago,

the outstanding characteristics of the extended professional is a capacity for autonomous professional self-development through systematic self-study, through the study of the work of other teachers and through the testing of educational ideas by classroom research procedures.

(Stenhouse, 1975, p. 144)

Professional action

Action research is primarily concerned with change, being grounded in the idea that development and innovation are essential parts of professional practice. At the heart of any practice lies the complexity of social interactions (usually involving large groups) in which there is always opportunity for improvement. In this context, the natural tendency of human beings to reduce complexity by establishing routine practices provides the advantage of freeing us to handle a large number of decisions and actions at the same time, but inhibits our ability to understand our own motivation and the consequences of our practice. Action research rejects

the idea that changes and “improvements” are needed because there is some deficit or failure on the part of practitioners, and sees change instead as an inevitable and important part of being a professional. Moreover, as Stenhouse (1975) recognized in the practice of teachers, curriculum development has little chance of success unless it involves teachers in exploring the implications of the changes for their own educational values, and in finding out how to make any necessary alterations to the routines of their practice. We believe the same is true for the enactment of real, meaningful change in other professional practice situations. This approach to change presupposes a *reflective view* of professionalism, which is very different from the commonly held *technical rational view* (Schön, 1983).

Donald Schön (1983), in his highly influential book, *The Reflective Practitioner*, distinguished between Technical Rationality and Reflective Rationality in the practice of professionals. To Schön, *Technical Rationality* is a way of conceptualizing political and administrative interventions in educational systems and other institutions that follows these three basic assumptions:

- There are general solutions to practical problems.
- These solutions can be developed outside practical situations (in research or administrative centers).
- The solutions can be translated into practitioners’ actions by means such as publications, training, and administrative orders.

Technical Rationality is operationalized via the classical RDD model of innovation that we described earlier in this chapter. In the RDD model, improvements of practice are primarily a result of improved general and applied theories and norms transmitted to the teacher, nurse, social worker, or other practitioners via the use of incentives and control mechanisms used to ensure their correct application.

Reflective Rationality, in contrast, follows these three very different assumptions:

- Complex practical problems require particular solutions.
- These solutions can only be developed inside the context in which the problem arises and in which the practitioner is a crucial and determining element.
- The solutions can only rarely be successfully applied to other contexts, but they can be made accessible to other practitioners as hypotheses to be tested in practice.

These assumptions imply the development of new types of communication among practitioners—dynamic networks of relationships to assist them in taking responsible action in the face of complexity and uncertainty.

This kind of collaboration implies exchange processes among or between teachers, nurses, or social workers, and other groups in which there is symmetry, rather than a hierarchy, of power; it is often practitioner-initiated and not bound to any pre-specified procedures.

Reflective Rationality depends upon the development of a dynamic learning culture, which is based on the understanding that local initiatives exist already, and that their growth process should be supported rather than ruptured and thwarted by imposed change. If specific innovations are forced upon people and institutions, this tends to reduce their coping power and problem-solving capacity and increase their dependence—because their existing potential for innovation is not encouraged but ignored and thus, in the long run, damaged.

To understand professional change in terms of Reflective Rationality, we need an adequate description of complex, professional action. Schön's (1983) account of "reflective practice" is based on an analysis of practice in a number of different professions. He formulated different relationships between professional knowledge and professional action, which we now discuss with respect to the principles of action research.

Action type I: *Tacit knowing-in-action*

When professional practice flows smoothly and appears simple to an onlooker, action is based on "tacit knowing-in-action." This type of professional action has these characteristics:

- Thinking and acting are not separate (skillful, practical activities take place without being planned and prepared intellectually in advance).
- The professional is frequently unaware of the sources of his/her practical knowledge or how it was learnt.
- The professional will usually not be able to give a straightforward, verbal description of this practical knowledge.

Nevertheless, these actions could not have resulted without the knowledge of the professional practitioners. Their skillfulness, their situational appropriateness, and their flexibility indicate a knowledge base that is "tacit" for the time being. As Polanyi noted, "we know more than we can tell" (1966, p. 4).

The most important examples of tacit knowing-in-action are "routines." Routines are actions or "mind-sets" that have been built up through frequent repetition, are carried out comparatively quickly, and are executed largely unconsciously. There are clearly problems that can come about if all professional practice consists of routines applied mechanically. However, there are positive effects of routines. In teaching, for example, they contribute a certain stability that gives pupils the

chance to anticipate what is coming and to gauge their actions accordingly. Routines are also essential in allowing us to do more than one thing at a time, which is one of the typical requirements of practice. Therefore, the routines that are explicit actions of tacit knowing-in-action cannot sensibly be excluded from the concept of *professional action*. Routinized and flowing action that draws on implicit knowledge is the basis for competent, professional practitioner action in simple, or made-simple-by-experience, situations.

Action type II: Reflection-in-action

As important as knowing-in-action is to the professional in practice, there are those times when new and complex situations have to be dealt with, or disturbances and problems disrupt the smooth flow of routinized action. It is when we enter the “swampy lowland where situations are confusing ‘messes’ incapable of technical solutions” (Schön, 1983, p. 39) that we need an alternative to Technical Rationality and knowing-in-action: reflection-in-action.

When professionals reflect-in-action, they become researchers in the practice context. They are not dependent on the categories of established theory and technique, but construct new theories of the unique cases. Their inquiry is not limited to a deliberation about means that depends on a prior agreement about ends. They do not keep means and ends separate, but define them interactively as they frame a problematic situation. They do not separate thinking from doing, but instead reason about how their decisions must later become actions. As Schön (1983) noted, their experimentation is a kind of action that is built into the professionals’ inquiry.

This “research in the practice context” need not be translated into words: it may take place in the course of action in a universalized form, in graphical form as sketches on notepads, or partly verbalized in a process of demonstration, imitation, comment, and joint experimentation that is frequently used in the training of practical competencies. Reflection-in-action resembles, as Schön says, a “reflective conversation with the situation” (Schön, 1987, p. 56). It is what we have heard teachers refer to as the “monitor and adjust” of good practice.

Action type III: Reflection-on-action

As we have seen, “tacit knowing-in-action” draws on accumulated practical knowledge under simple or routine circumstances. “Reflection-in-action” begins whenever practitioners find themselves in more complex situations that cannot be coped with by routine: such reflection occurs within action, it is not at all rare, and it need not be verbalized to be useful

in problem solving (see Argyris & Schön, 1992). The third action type, *reflection-on-action*, is an important feature of professional action: it occurs when it is necessary to formulate knowledge explicitly and verbally, to distance ourselves from action for some time, and to reflect *on* it:

- It improves our ability to analyze and reorganize knowledge: consciously reflecting on action slows it down and disturbs our smoothly running routines, but it also facilitates careful analysis and allows us to plan changes.
- It makes knowledge communicable: the knowledge underlying professional action can be made visible and communicated to others, such as colleagues, clients, and interest groups.

In reflection-on-action, reflection distances itself from the flow of activities, interrupts it, and focuses on data that represent the action in an *objectified* form. This ability is a constituent part of professional competency because it is the basis for fulfilling three requirements placed on today's professionals:

- We have to cope constructively with serious problems or complex new situations. By distancing ourselves from the flow of activities we have a better chance of dealing with the problems that entangle us, redefining them and reorganizing our response. For example, when we understand that there is some discrepancy between our expectations and what has actually happened, it is possible to become aware of the tacit knowledge embedded in our routine actions, to search consciously for mistaken assumptions, and to reformulate our thinking. Many of the methods (Ms) included in this book aim at activating our tacit knowledge (see Chapter 4).
- We need to take responsibility for the education and induction of novices into the profession and for passing on professional experience to the next generation. To do this, we need to express in a verbal and organized way the knowledge underlying our practice.
- We must be able to communicate our knowledge and our professional action to colleagues, pupils, patients, clients, and others, putting forward rational arguments for them and inviting critical discussion. This, too, requires the ability to put our professional knowledge into words.

To sum up: professionals need to be competent in all three types of action. To be efficient in the run-of-the-mill situations of everyday practice, we have to rely on routines. Our professional action builds on reflection-in-action. To cope with difficult and complex problems, take control of our practice so that we can change it if we so wish, and fulfill our

responsibilities to society, we have to involve reflection-on-action. It is reflection-on-action that is the basis of action research.

The iterativity of action research

Schön (1983) argued for the importance of reflection in the practice of professionals. He also suggested, as did Dewey before him (1933), that practitioners can test their ideas through action. Action research is built on the idea that knowledge growth and the improvement of practice go hand in hand with engaging in practice. This is different from most traditional social research that is split into two phases: a phase of contact to practice followed by a second that is a retreat to the research institution, in which experiences, recorded as data, are reflected upon and analyzed. This is its strength, because much effort can be put into this phase of distanced criticism. However, it does not match the needs and rhythm of professional practice (Feldman & Atkin, 1995). Action research does not strictly separate phases of action from phases of reflection. Reflection occurs in part *within* action: the more distanced mode of reflection on action is not limited to specific phases in research. Again and again, reflection of action researchers assumes a definite form in their actions that have to prove their worth under the day-to-day conditions of their practice situations. If new discrepancies turn up between expectations (based on their practical theory) and the realities of practical action then a new process of further development of theory and practice is indicated. In this sense, practice is a test of the quality of prior research. Research is less oriented toward a definite aim; it has a long-term character and is more continuous than conventional research. Reflective practitioners need not start from a hypothesis that is slimmed down to a few variables and is to be corroborated or refuted. They examine the consequences of action, the intended consequences as well as the unintended ones.

In action research, changes in practice are implemented concurrently with the research process. Therefore, when practitioners engage in action research, they do not need to wait for the results of social scientists in order to effect positive change in their practice. This can in a certain sense pose a danger for practitioners because they have to live with the actions that are derived from their practical theories. An important way that action research reduces this danger is through its iterativity in which the results of reflection again and again gain practical form and in which this form again and again can stimulate new reflection and development: by repeating the movement from action to reflection and back again, etc., (see Figure 10.3) it is possible to detect limitations in the practical theory and to develop useful action strategies. Because of this characteristic of action research, the actions of reflective practitioners gain in quality. And through this characteristic action research processes undergo frequent tests of their quality.

The value orientation of practice

We end this chapter and our book with a reminder that those engaged in action research seek to improve social situations through the improvement of their practice. We believe that practical actions are representations of professional values in a concrete form (Elliott, 1998). Elliott bases this on his analysis of Aristotelian ethics in which he describes moral concepts as necessarily diffuse and open-ended, needing one of several possible concretions through action. For example, in an educational context, all actions (not only those that are intentionally value-oriented) are understood as explicit or implicit “interpretations of educational values.” In other words, it is legitimate to ask what values are embedded in action. As the “translation” from general values to concrete actions is always uncertain, it follows that there is an obligation to reflect on the relationship between concrete action and professional values.

In the same way that it is legitimate to ask what values are embedded in action, it is also legitimate to ask what types of knowledge and skills do we need to take action that will lead to the attainment of our values. To us this is a modification of the question asked by Patti Lather—what does it mean to do research in an unjust world—by asking instead, “what would research, especially action research, need to look like to make the world more just?” (Feldman, Bennett, & Vernaza-Hernández, 2015, p. 86). Of course, to answer this question means that it is important to make our values explicit. Earlier in this chapter we summarized Schön’s (1983) theory of reflective practice. Missing from it, and in many interpretations of what it means to be reflective in different professions, is an explicit understanding of what the aims are for engaging in reflective practice. Clearly, reflection is not just “thinking about” one’s practice. We all know that all people think, and that it is impossible for any human being to solely rely on routine. So embedded in what is meant by reflective practice is that by engaging it, practitioners improve in their practice, help to improve their practice situations, and in a larger sense lead to an improvement of the human condition. It is how we conceive of what constitutes improvement that our values come into play.

For us, the types of improvements that can come about when practitioners engage in action research are ones that can lead to a more just society. That social justice is an aim of professionals can be seen in this definition from the National Association of Social Workers (NASW): “Social justice is the view that everyone deserves equal economic, political and social rights and opportunities.” It adds that “Social workers aim to open the doors of access and opportunity for everyone, particularly those in greatest need” (National Association of Social Workers, 2017). The NASW’s conception of social justice is similar to that of John Rawls (1971). The idea of social justice builds on Rawls’s idea of public values related to

the freedom and equality of members of a community and the need for fairness in social cooperation.

Among such public values are the freedom of religious practice, the political equality of women and of racial minorities, the efficiency of the economy, the preservation of a healthy environment, and the stability of the family (which helps the orderly reproduction of society from one generation to the next).

(Wenar, 2017)

In education, it has been argued that in a more just world people would aim for “full and equal participation of all groups in a society that is mutually shaped to meet their needs ... where the distribution of resources is equitable and all members are physically and psychologically safe and secure” (Bell, 2007, pp. 1–2). For some this does not go far enough, especially those who take a critical perspective, because it suggests that a more just society is attainable with the redistribution of resources. To critical theorists, social justice would also require actions to eliminate institutionalized domination and oppression (Young, 2011).

We believe that those who are engaged in action research are obligated to work toward a more just society. Following on the principles proposed by Cohen (2011) in his book *Justice in the City*, we would like to suggest that this obligation can be met by doing action research that:

- Helps to create practice situations in which we can hear the cry of the poor and disenfranchised;
- Protests against injustice at any place in the web of relationships among those who constitute our practice situations and the wider communities; and
- Makes the outcomes of our action research occasions for justice.

Final thoughts

We realize that this is what you, the reader, will be reading last, closing the book or turning off your e-reader, and leaning back in a chair. What impressions will linger in the mind? What ideas will come after the book is finished? These are our wistful thoughts as we sit in front of the last pages of our manuscript. There cannot be a definitive statement on action research because it must always be context-specific and responsive to the values and practices of the participants in the situation. This book is as far as we were able to go in presenting a method of research that, for us, has spilled over into being a way of life. The book is not finished. There is an important chapter still to be written by you, the reader—on

extending and redefining your own practice and, through this means, further developing theory.

Notes

- 1 Recent studies suggest that Collier's work may not have been in the interest of the indigenous population. See, for example, Takaki (2008).
- 2 HCP was started in 1967 and intended to be an extensive curriculum in social education (Elliott, 1998; Stenhouse, 1968, 1971).

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