# ACTION RESEARCH METHODS

## PLAIN AND SIMPLE

SHERI R. KLEIN

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## Plain and Simple

*Edited by*
*Sheri R. Klein*

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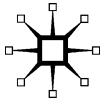

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# Preface

*Action Research Methods: Plain and Simple* provides a balanced overview of quantitative and qualitative methodologies and methods for conducting action research within a variety of educational environments and community-based settings. The breadth and range of chapter topics, from program evaluation to social justice action research, speaks to the diverse approaches that are available to action researchers. The overarching aim for this text is to address the complexities inherent in action research in terms as plain and simple as possible, while not oversimplifying.

The cover image, *Moments and Minutes and Hours and Days and Months and Years* (2007) by artist Elizabeth Knowles, depicts a space defined by layers, and varying lines and shapes, that converge and overlap to produce an intricate visual web of connected forms suggestive of lace, the night constellations, or a microscopic view of a living organism. It speaks to particular and intimate ways of seeing as well as distant viewing. It is a visual reminder that the action research process requires both ways of seeing: close viewing for discovering details and nuances, crafting the research, and analyzing data, and a more distant viewing for seeing the "whole picture" and connecting disparate pieces of data into a holistic understanding about a phenomenon.

The chapter authors are experienced educators, administrators and researchers who have a broad range of teaching and research experiences in the public schools, in higher education, and in international contexts. Chapters include a discussion of key terms and definitions related to the methodologies and methods, and a discussion of data collection and analysis strategies using examples from theory and practice. Overall, the text aims to provide a balanced coverage of theoretical, ethical, and practical concerns related to conducting action research.

Chapter 1, "Action Research: Before You Dive In, Read This!" provides a historical overview of action research and discusses the process of such research; myths about action research; the roles of the researcher; considerations in beginning action research; understanding links between theory, research methodologies, methods, and aims; selecting a design; developing research questions; collecting and analyzing data; crafting the research; and reporting and disseminating findings. Chapter 2, "Interviews," suggests that this method is more than just "asking some questions"; rather, it entails an understanding of ethics, power dynamics, gaining access to participants, selecting participants, theoretical framing and developing questions, as well as practical considerations such as interviewing special populations, arranging meetings, and using technology. The chapter details how to prepare for and conduct an interview, as well as how to approach the transcription and analysis of interviews. Chapter 3, "Participant Observation," covers many issues in observation, such as selecting a research stance, meeting and discussing research objectives with stakeholders, protecting the integrity of the study, determining methods for data collection and analysis, and considerations in creating and using observation forms, checklists, and rating scales. Observation as a method for conducting action research in classroom and school settings is emphasized through sample research scenarios. Chapter 4, "A Case for Case Study Research in Education," addresses case study methodology for action research. Theoretical, practical, and ethical issues as well as limitations in using case study methodology are explored. Chapter 5, "Visual Research, Visual Data," addresses visual research as a methodology for action research. The chapter covers what constitutes visual research, visual data, as well as methods for visual data collection and analysis that draw upon critical theory, semiotics, material culture studies, and sample research studies. Chapter 6, "Arts-Based Research: Data Are Constructed, Not Found," examines the historical and philosophical foundations of arts-based research, the methodologies of arts-based educational research, ethical considerations, and data collection and analysis factors. Excerpts from an arts-based research study that utilizes the methodology a/r/tography are included to provide insights into the research process and method. Chapter 7, "The Value of Portfolio Data in Action Research," addresses the relevance and benefits of portfolio data in action research and how action researchers can successfully gather, organize, interpret, and judge student portfolio data,

specifically student artworks, in both traditional paper and digital formats. Other important issues relevant to collecting, storing, viewing and analyzing visual portfolio data using quantitative and qualitative methods are discussed. Chapter 8, "Quantitative Methods in Action Research," explores a rationale for using quantitative data in action research and practical and ethical issues in conducting quantitative research. Specifically, this chapter addresses how to conduct surveys, find or develop a questionnaire, create or use observation instruments, and use extant data in research. Methods for analysis are discussed using sample research questions and scenarios. Chapter 9, "Program Evaluation Research," discusses how action research can take the form of evaluation research for the purposes of assessing the efficacy, value, or merit of an educational program. The chapter discusses various practical and ethical issues, such as, developing questions, understanding stakeholders, identifying and analyzing data, and reporting the findings. Chapter 10, "Critique, Advocacy, and Dissemination: I've Got the Data and the Findings, Now What?" explores strategies for conducting action research as a path to social change. Drawing on the arts and cross-cultural and international exemplars, social justice as action research is explored as pedagogy that extends beyond localized contexts and interventions, and that is intended to both illuminate and alter how we teach, learn, and live.

End-of-chapter activities aim to reinforce key terms and chapter themes, engage readers in critical reflection, and facilitate a deeper understanding of action research through individual and collaborative skill-building activities. Ultimately, the text is intended to increase awareness about action research and to assist teacher-researchers in making informed choices about their research.

The primary audiences for this book are graduate students and faculty in education and education-related fields and practicing K–12 teachers. Undergraduates conducting class research projects/honors theses may also be an audience for this text. Other professionals in the fields of arts administration, arts education, educational administration, health and human services, library science, and organizational leadership as well as teacher-researchers and/or administrators who are members of informal communities of practice and are engaged in professional development may also find this text useful. The text is likely to be utilized and read sequentially by those reading it in the context of graduate study; however, some chapters might be read together. If the text is used independently, it is recommended that the

end-of-chapter activities be completed and shared with a colleague or mentor for feedback. It is my hope that this text can stimulate thinking about the possibilities for action research, provoke dialogue and collaboration among colleagues, and provide some guidance for crafting and implementing action research studies that are both meaningful and timely.

Sheri R. Klein, PhD

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# Chapter 1

# Action Research: Before You Dive In, Read This!

*Sheri R. Klein*

## Introduction

Current challenges facing K–16 education, such as accountability, meeting standards, reaching diverse learners, curricular reform, and creating equitable conditions for teaching and learning, have fostered a greater interest in *action research*. To put it simply, action research is "a systematic, intentional inquiry by teachers" (Cochran-Smith & Lytle, 1993, p. 53; Stenhouse, 1985, as cited in Cochran-Smith & Lytle, 1993, p. 7) designed to "bring about practical improvement[s], innovation, change or development of social practice" (Zuber-Skeritt, 1996, p. 83) and to "understand, improve and reform practice" (Cohen, Manion, & Morrison, 2007, p. 297).

Historically, the evolution of action research within the field of education is the result of a complex web of influences and developments. Action research can be traced to the influential work of Lewin (1946) and his articulation of the action research process (planning, acting, observing, and reflecting) and Corey's (1953) seminal work that helped to mainstream action research into the field of education. An emphasis on reflection in teacher preparation has also contributed to the growing body of studies that focus on teaching as the subject of inquiry (Brookfield, 1995; Cochran-Smith & Lytle, 1990; Dewey, 1904; Schön, 1983, 1987), "making inquiry an integral part of the professional lives of teachers" (Cochran-Smith & Lytle, 1993a, p. 21) and positioning the inquiry of teachers as intellectual work (Giroux, 1988). The growing number of books and reference guides about action

research (Campbell & Groundwater-Smith, 2010; Hopkins, 1993; James, Milenkiewicsz, & Buckham, 2008; Kemmis & McTaggart, 1992; McNiff & Whitehead, 2009; Mills, 2010; Pine, 2009; Sagor, 2005, 2010; Stringer, Christensen, & Baldwin, 2010; Zuber-Skerritt, 2009) has also contributed to advancing action research within educational contexts and provides teacher-researchers with a wide range of practical and methodological guidance.

The persistent themes that represent the evolution of action research in the last fifty years include "field research, community, school-based curriculum, progressive education, teacher-as-researcher, demographic changes, knowledge-practice gaps, and ethnic-human relations" (Noffke, 1997, p. 11). There has been an increasing focus as well on taking a critically reflective approach to action research to explore connections between knowledge and action (Carr & Kemmis, 1986). Recent themes within action research reflect an emphasis on collaborative inquiry, with aims toward social justice (Cammarota & Fine, 2008) and critically examining the political dimensions of schooling (Dick, 2010; Noffke, 2009).

The evolution of and growing interest in action research among K–16 educators can also be attributed to educational researchers who have advocated for more qualitative research and inductive methods (Argyris, Putnam, & Smith, 1985; Eisner, 2006; Glaser & Strauss, 1967; Lather, 1991; Lincoln & Guba, 1985; Schulman, 1986; Stake, 1995) within educational research, particularly arts-based research methods (Banks, 2001, 2007; Cahnmann-Taylor & Siegesmund, 2008; Eisner, 2006; Knowles & Cole, 2008). Such methods have allowed researchers to understand teaching and schooling practices through lenses that "liberate the concept of research from domination by science" (Eisner, 2006, p. 10) and allow for "research that brings to life the sights and sounds" of practice in any "extricable combination of observations, thoughts, feelings, intuitions, trials, errors, and discoveries" (Stout, 2004, p. 196). Interpretive and qualitative methods support a self-reflexive and self-critical stance that allows action researchers "to 'move closer': to linger, connect, perceive, [and] re-see" (Bresler, 2006, p. 56) the complexities and nuances of practice.

However, some action research questions warrant numerical data collection and analysis to describe and understand behaviors and settings. The blending and acceptance of both normative and qualitative research methods within action research today offers researchers more choices for inquiry into "student-centered," "teacher–classroom,"

"school-centered," "instructional development" (Tomal, 2003, p. 12), and community-based issues.

In recent years, action research has gained prominence within teacher education undergraduate and graduate programs. There is a focus on action research in preservice teacher education courses (Kitchen & Stevens, 2008; Price & Valli, 2005) and in dissertation research (Cochran-Smith & Lytle, 2009). Action research has become a viable way for educators to not only examine what is, but to imagine what might be possible. It is therefore not surprising that action research is gaining wider use by educators and administrators in a large array of educational settings.

The premise underlying action research in education is that practitioners are in the best position to engage in inquiry about their practice. Action research is typically conducted in natural settings (schools, communities, and organizations) where a researcher is concerned about a particular issue of practice. Over the years, the terms "teacher research," "action research," "classroom research" (Hopkins, 1993), and "practitioner research and inquiry" (Cochran-Smith & Lytle, 2009) have often been used interchangeably. However, Price and Valli (2005, p. 57) suggest that "teacher research" or "teacher action research" is self-initiated research centered on issues of pedagogy and curriculum and conducted within classroom settings. On the other hand, "action research" has been described as more concerned with broader questions and issues impacting teaching, learning, and schooling and is not confined to K–16 classrooms. Cochran-Smith and Lytle (2009) extend this understanding with the term "practitioner research and inquiry" to define the notion of educational practices as deeply "relational…cultural, political, and historical" and research as a "stance, rather than an individual project" (p. 89). In this sense, action research can be understood as being multidimensional, multipurposeful, and flexible as an approach to inquiry.

Educators who support the potential of action research to foster social change (Carr & Kemmis, 1986; Hollingsworth, 1997; McNiff, 2002) view action research as praxis oriented, with "emancipation as a goal" (Cohen et al., 2007, p. 303). Others see action research as "educative research," with an eye toward "political understanding of schooling" and the development of "voice" that is necessary for social change (Gitlin & Hadden, 1997, p. 72). Aligned with critical theory, this stance supports action research as social justice research or *emancipatory action research* and *participatory action research* (Cammarota & Fine, 2008; Oja & Smulyan, 1989) and is focused

on issues of equity and social justice. While preservice teachers can conduct emancipatory action research, Price and Valli (2005) report that action research with the aim of institutional change may be more effective when initiated through collaborations among practicing teachers.

There is no one way or "right" way to conduct action research. However, most research begins with a cycle of planning and reflecting that is well tailored to exploring "a [particular] problem and possible course of action" (Johnson, 2005, p. 21). Whatever stance is taken toward action research (see table 1.1), the process is often described in linear steps or stages (Tomal, 2003). In reality, the process is more akin to a cycle, or a spiral, where "testing ideas" and "increasing knowledge" are outcomes of a process that "links theory and practice into one whole: ideas-in-action" (Kemmis & McTaggart, 1988, as cited in Verma & Mallick, 1999, p. 93).

## The Process of Action Research

A review of action research models for conducting such research (Cohen et al., 2007; Elliott, 1991; Glanz, 1998; McNiff, 2002; Sagor, 2005) finds that they all share similar characteristics that begin with a review of current practices; identification of a topic, issue, or concern; and the development of questions that can guide inquiry, planning, action, making adjustments, evaluation, and making "informed action[s]" (Sagor, 2005, p. 4). The spiraling nature of action research is illustrated in models by Elliot (1991) and Glanz (1998): selecting a focus, observing, reflecting, planning data collection, analyzing and interpreting data, evaluating, taking action, reflecting, and continuing to modify actions. The reflection is a cyclical process and is both "reflection-on-action" and "reflection-in-action" (Schön, 1983), where theory becomes practice, practice informs theory, and tacit knowledge is made more conscious (p. 59).

This reflection process can ultimately lead to the identification of new levels of inquiry, known as "double-looping" (Argyris & Schön, 1974), and can help to identify underlying causes of problems. As such, the action research process may be viewed as "purposeful action" (Price & Valli, 2005, p. 68), hermeneutical as well as constructivist, in that it "urge[s] a diversity of views and a continuing conversation" (Noddings, 2007, p. 77). Ultimately, action research is a methodology that encourages the creation of multiple narratives

resulting from the "aggregation of interpretations from various perspectives" (Noddings, 2007, p. 78).

## Six Myths about Action Research

A discussion about what action research is *not*, and about some of the myths surrounding action research, is important before engaging in action research. The first myth is that action research is a solitary activity. False. There is increasing evidence that action research is conducted "when two or more practitioners pursue questions of shared interest" (May, 1997, p. 229). The second myth is that action research is easy to conduct or is a "soft option" (Verma & Mallick, 1999, p. 93) for researchers. False. This form of research requires rigor, commitment, and a critical eye toward all phases of inquiry. A third myth is that action research is a method of research. False. Action research is a methodology, or a set of theories and principles that guide research. While action research may include multiple methods for gathering and analyzing data, it is not a method of research. Methods are a specific set of techniques for data collection or data analysis, such as interviews, questionnaires, and so forth. A fourth myth is that action research is always classroom based. False. While action research is "the research that teachers do" (Stout, 2004, p. 196), action research can take place outside traditional classroom settings, within and across communities and organizations (Hollingsworth, 1997). A fifth myth is that action research is not political. False. Action research implies change, and any change carries the potential for the jostling of beliefs and practices, along with personal, pedagogical, and institutional changes. Lastly, the sixth myth is that action research is only for practicing teachers. False. Action research principles can be introduced to preservice teachers and graduate students who can assume the role of a researcher within arranged settings in schools and classrooms. Action research is also used widely with health care practitioners and in a variety of community, institutional, and organizational settings.

## Roles of the Researcher in Action Research

The action researcher begins the cycle of reflection in a process that will allow for the emergence of a research topic and the development

of an initial set of questions that may guide data collection and analysis. Cruikshank (1987) reminds us that "teaching can be thought about and considered as a means of meditation, musing, contemplation, pondering, deliberation, cogitation, reasoning and speculation" (p. 3). The desire to change practice begins with self-awareness and a deliberate process of reflection and question posing.

Action researchers engaging in qualitative research are also concerned with *intersubjectivity* and *reflexivity* in the research process. Intersubjectivity is a term that broadly speaks to shared interpretations among and between a researcher and participants that are socially constructed through the research process. Researchers (Banks, 2007; Cohen et al., 2007; Pink, 2005, 2007) recognize the importance of reflexivity, or the acknowledgement of bias in the research process relative to gender, economic, and power relations within a research setting. Researcher-generated data can offer an opportunity for researchers (Pauwels, 2011, p. 7) to explore their feelings, beliefs, and attitudes throughout the action research process. Reflexivity is a self-conscious stance toward research that helps to create a researcher presence by making explicit one's motives and desires (DeFreitas, 2008, p. 470). This presence can be made visible through reflexive writing and connecting with the audience on an emotional level and by sharing in an authentic and honest way.

**Review of the literature.** A literature review is a standard feature of educational research and is essentially "an examination of journal articles, ERIC [data base] documents, books, and other sources related to your action research topic" (Johnson, 2005, p. 55). It is recommended that researchers start with a general Internet search using different combinations of descriptive terms for topics of interest. If few results emerge, different search terms may be necessary before approaching larger university databases.

The advantage of conducting a literature review is that it provides an overview of current research methodologies, methods, and findings. A literature review may also yield insights into new questions or reveal that there is a paucity of research about a specific topic. Sources for garnering insights about research topics also include titles and abstracts of recent theses and dissertations on a particular subject. Using the search term "action research" in *ProQuest*'s dissertation and theses database (available to current students as part of most university libraries) can yield solid examples of masters- and doctoral-level action research studies conducted in a variety of fields. By cross-referencing these lists, one can determine what themes or trends may exist in a given field and what new research questions and studies may be needed. More

historical resources should not be ruled out, but again it depends on the topic. While a literature review traditionally is conducted at the beginning of the research process, for qualitative researchers, a literature review is an evolving process as new questions emerge.

**Understanding links.** The soundness of action research rests on the correlation of a theoretical framework with the research questions and methods. Hesse-Biber and Leavy (2011) write that "qualitative researchers have been at the forefront of explicitly acknowledging and engaging with the link between method and theory" (p. 19) and that "epistemology, theory and method web to create a research nexus" (p. 20). As an action researcher, it is critical to have a sound understanding of theory, research methodologies, and methods in order to understand your own position within the "web" of educational research.

Table 1.1 provides a general overview of research paradigms, methodologies, methods, and aims for education research, including action research; however, it is not an exhaustive summary. Many of the terms listed in the table are explained throughout this book and are also terms common in education research. It should be emphasized that action research is a methodology that allows for a variety of theoretical frameworks and methods. However, action research is most often associated with qualitative and interpretive approaches and inductive methods (Bogdan & Biklen, 1992; Glesne & Peshkin, 1992; Patton, 2002; Schwandt, 2001; Strauss & Corbin, 1998), as action research is likely to focus on "subjective experience, small scale interactions, and understanding" (Hesse-Biber & Leavy, 2011, p. 15).

Action research is what Stout (2004) describes as "bricoleuring," in that it allows a researcher to "take what it [he/she] needs from various methodologies and philosophical traditions" (p. 196). Rather than beginning with a hypothesis and confirming or disconfirming it, an action researcher typically focuses on a "topical area, generating codes, refining codes, and [engaging in] embodied interpretation" (Hesse-Biber & Leavy, 2011, p. 9). It is in "embodied interpretation" that grounded theory can occur, or the process of "developing theories to explain phenomena . . . [and where] theories emerge from the data rather than being pre-figured or pre-determined" (Cohen et al., 2007, p. 170).

While qualitative research methods might be more applicable to the kinds of questions educators may have about understanding the complexities of classroom practice and building theory (Strauss & Corbin, 1998), quantitative methods may also be necessary. Furthermore, research questions may require using mixed methods to achieve a

variety of data that include numerical, text, and visual components. In many ways, mixed methods are becoming a separate research paradigm (Creswell, 2007, 2009).

To help understand the unique qualities of each research paradigm, they are listed separately in table 1.1; however, in practice, and particularly in studies that use mixed methods, rigid categories often blur. For example, if you look at the table, you can see that interpretive and qualitative research guided by critical theory has different aims than qualitative research that is influenced by phenomenology or complexity theory. However, you can also see similar overlaps in the data collection methods and methodologies within and across qualitative research. While qualitative research methodologies typically employ visual research methods (discussed in greater detail in chapter 5), quantitative research may also use visual research methods in the construction of tools that contain imagery or symbols. "Arts-based" is a term applied to both data and methodology. Arts-based data includes any data (literary, visual, performative, or interdisciplinary) such as, photography, painting, drawing, dance, film, performance, poetry; it is the data created in the context of qualitative, arts-based research. However, a distinction should be made that not all arts-based research is concerned with educational issues.[1] Arts-based research that is concerned with educational issues is referred to as *art-based educational research* (ABER) and *a/r/tography*; these methodologies may be of particular interest to teacher-researchers in arts education and are discussed in greater detail in chapter 6.

**Selecting a research design and developing research questions.** Price and Valli (2005) assert, "Not every action research agenda is possible or worthwhile" (p. 69). Reflection on the following questions before selecting a research design can be beneficial: What is the research about? Why is it worth investigating? How will the research take into account ethical, political, and moral concerns? (Mason, 1996, as cited in Schwandt, 2001, p. 229). Additional questions might include the following: What theoretical framework aligns with the research design? What changes do I seek in my practice? What stakeholders need to be involved? What are my constraints (time, resources, etc.)? What resources do I need? Overall, what do I hope to better understand or change?

Research questions may emerge from any number of overlapping areas of practice: (1) the selected research design, (2) observations of practice, (3) a review of the literature, (4) dialogue with colleagues, and (5) insights from professional meetings and conferences. Cochran-Smith and Lytle (2009) and others support the formulation

**Table 1.1** Overview of Action Research Paradigms, Methodologies, Methods and Aims

| *Research Paradigm* | *Theoretical Frameworks* | *Data collection Methods & Tools* | *Methodologies* | *Aims* |
|---|---|---|---|---|
| Quantitative | Positivist | Checklists<br>Questionnaires<br>Records<br>Rubrics<br>Survey method<br>Testing<br>Visual data | Action research<br>Empirical<br>Evaluation<br>Experimental<br>Quasi-experimental<br>Deductive logic | To diagnose; test a hypothesis; generalizability objectivity prediction reliability replication verification |
| Qualitative: Interpretive | Complexity theory<br>Constructivist<br>Discourse theory<br>Feminist<br>Grounded theory<br>Hermeneutics<br>Material culture<br>Semiotics<br>Phenomenology | Artifacts<br>Arts-based data<br>Field notes<br>Interviews<br>Journals<br>Observation<br>Portfolios<br>Visual data | Action research<br>Arts-based<br>Auto-ethnography<br>Case study<br>Ethnography<br>Narrative inquiry<br>Visual research<br>Inductive logic | To seek meanings and understandings about practice; to generate new theory; context-bound |
| Qualitative: Critical | Constructivist<br>Critical media theory<br>Critical race theory<br>Critical Indigenous Theory<br>Deconstruction<br>Feminist<br>Marxist<br>Post-Marxist<br>Socialist Feminism<br>Queer theory<br>Social theory | Arts-based<br>Field notes<br>Interviews<br>Journals<br>Narratives<br>Observation<br>Visual data | Arts-based<br>Auto-ethnography<br>Case study<br>Critical action research<br>Critical ethnography<br>Critical hermeneutics<br>Radical hermeneutics<br>Emancipatory action research<br>Participatory action research<br>Visual research | To examine and challenge inequities, political, social economic and power relations within educational settings; to examine and challenge binary categorizations and taken for granted assumptions; social action and social justice aims |
| Qualitative: Arts-based educational research (ABER) | Complexity theory<br>Critical theory<br>Deconstruction<br>Feminist<br>Literary theory<br>Material culture<br>Phenomenology<br>Post-structuralism<br>Visual Cultural Studies | Artifacts<br>Arts-based<br>Art work<br>Narratives<br>Journals<br>Poetry<br>Performance | A/r/tography<br>Action research<br>Ethnography<br>Narrative inquiry<br>Visual research | To examine the intersections of artistic and pedagogical practices |
| Mixed methods | Combination of theoretical frameworks | Quantitative and qualitative | Action research<br>Empirical and interpretive | To explain and understand practice through a variety of data and contexts |

of questions that will get beyond the technical and that stimulate engaged inquiry with others. Criteria for developing research questions may include the following: (1) Do the questions allow for "inquiry as a means for teaching and learning?" (2) Do the questions allow for "layered research" (Burnaford, 2007, p. 40) or the gathering of multiple evidences and data? (3) Are the questions reasonable for inquiry given constraints (time, resources, etc.)? and (4) Are the questions clear and focused? It is important to remember that research questions shape the research design of the study and the selection and design of research tools.

Research questions for action researchers engaging in participatory action research may be guided by aims of social justice. Other action research may be guided by questions that are not easily answered but that might provide new insights, understandings, and questions as a result of arts-based educational research, or ABER.

## Before Implementing and Collecting Data

It is advisable to discuss a tentative plan with stakeholders, or those who may be impacted by the research, such as administrators, participants, parents, community members, and other researchers. Practical measures should be taken to address the logistics of the study (times, places, etc.) if conducting research in other classrooms or school settings. It is at this stage that the intent of the research and the expectations for all participants should be communicated and clarified. Any and all required forms by institutions, such as institutional review boards (IRBs), should be completed and submitted prior to beginning the study and collecting data. Copies should be made of all forms and kept on file.

## Selecting Data Collection Methods

The selection of research methods begins with an awareness and understanding of qualitative research, quantitative research, and mixed methods and determining what kind of data are needed to best answer the research question(s). Sometimes using mixed methods for data collection may be necessary and prudent for rigor or evaluative purposes (Creswell, 2009; James et al., 2008).

The kinds and purposes of data associated with *qualitative* action research typically include the following:

- **Artifacts:** Participant-generated; teacher-generated; physical artifacts found in the visual and material culture of classrooms, schools, or other settings; documents or other evidences included in a portfolio
- **Arts-based data:** Created or existing artworks (literary, visual, and performing arts) used to examine artistic and/or pedagogical questions of the teacher-researcher; can also be student artworks created within or outside of school contexts
- **Image-based data:** Photos, graphs, charts, sketches, videos, drawings (including computer-generated and in virtual spaces); participant generated; researcher generated; created or existing data used to document a place or setting; to capture the mood, emotions, and feelings of participants; to document performance of teachers; or to communicate numerical data
- **Journals, field notes, correspondence, personal documents:** To capture feelings, emotions, beliefs, and interactions of a researcher; to log participants' behaviors; e-mail or paper communication between researchers and stakeholders
- **Open-ended questionnaires:** Allows for participants to respond in writing; yields opinions and attitudes of participants
- **Portfolios:** A collection of created or existing data (text, visual, and/or multimedia) in paper and/or digital formats that yield a holistic portrait about the development and achievement of an individual or program
- **Text-based data:** Participant-generated narratives; researcher-generated narratives; journals; poetry
- **Transcripts:** Verbatim text generated from interviews

The kinds and purposes of data sources associated with *quantitative* action research typically include the following:

- **Checklists:** To determine the frequency of a phenomenon or observed behaviors
- **Closed-ended questionnaires:** To assess the opinions and attitudes of participants; often uses Likert scales
- **Tests:** Norm-referenced or criterion-referenced achievement or aptitude tests; to assess levels of achievement, differences between individuals or groups; to predict future performance and/or determine remediation with individuals, programs, and schools
- **Text-based data:** Existing school records; archival records; historical documents
- **Rubrics:** Tools used to assess the quality of an artifact and/or performance using specific and quantifiable criteria

In selecting data collection methods, it is also important to think about practical issues, such as whether or not some tools can be adapted or if new ones need to be created. If collecting large amounts of data, particularly visual data, organization and storage are an issue. While some data can be stored electronically (digital photographs and recorded interviews, e-surveys and questionnaires, etc.), some data, such as paper portfolios, journals, logs, and the like, may require physical storage space. Sorting out how and where research data will be stored prior to the beginning of a study is recommended.

## Analyzing Data

The analysis of data in action research can utilize qualitative, quantitative, or mixed methods of analysis; various methods are discussed throughout this text relative to various methodologies. Lincoln and Guba (1985) suggest four criteria to consider regarding qualitative data analysis: *credibility* (achieved through member checking, prolonged observation, and triangulation); *transferability* (achieved through rich data descriptions); *dependability* (achieved through a researcher's accounts of research conditions); and *confirmability* (achieved through internal consistency of data, findings, and interpretations). In addition, Hesse-Biber and Leavy (2011) offer a different view of *validity* that is likened to "craftsmanship [and] has to do with how you perceive the credibility of the researcher" (p. 48)—that is, to what extent the researcher has been thorough and true to his or her methods. In this sense, validity and dependability are similar in meaning. Specific "threats" to dependability and confirmability can include loss of participants during a study, negative effects of using an instrument, attention given to participants that may affect their behavior, researchers' unconscious or conscious bias, or any other "contaminants" that may impact the setting of the study (Tomal, 2003, p. 82).

*Reliability* is a concern for researchers when accuracy and consistency of methods are important and is mostly associated with use of statistical procedures and quantitative methods. *Generalizability* is associated with the degree to which "findings would transfer to another context" (James et al., 2008, p. 93) and "may be of interest across a wider arena" (p. 95). Since most action research is conducted in small-scale settings and "the goal of analysis is to discover patterns, ideas, explanations and understandings" (Glanz, 1998, p. 186),

universally applied findings are typically not the aim. Having said that, a well-crafted study enhances the research on all levels.

## Craft and Aesthetics of Research

Elliot Eisner (1995) was one of the first educators and researchers "to apply methods and procedures for the analysis of aesthetic works to the study of human interactions within the context of schools" (Cahnmann-Taylor & Siegesmund, 2008, p. 100). For example, a researcher begins to pay attention to the look and feel of a classroom, to his or her relations within that setting, and to the aesthetics of spaces to understand practice. These concerns have particular relevance for those conducting action research using qualitative methods, as well as those conducting ABER or a/r/tography.

While the action research process, at least on paper, appears logical and sequential, it is also fraught with great uncertainties, the surfacing of new questions, bumps in the road, and a certain "messiness" that cannot be avoided. However, it is in the messiness that new understandings and questions can emerge. How a researcher deals with messiness is a matter of aesthetics as well as ethics. An ethical stance in research involves acknowledging and reporting the gaps in the research, what research questions may not have been answered fully or at all, and what events may have occurred within a setting that impacted the data collection and analysis. Other ethical concerns for action researchers include issues of confidentiality, privacy, protecting the rights of participants (Glanz, 1998, p. 241), and awareness of power relations when conducting "sensitive educational research" (Cohen et al., 2007, p. 119) that may involve interviewing powerful people or marginalized groups.

## Reporting and Disseminating

A critical question for an action researcher is how data and findings should be (re)presented. The contents and style of the report can vary depending on the research design; for example, a case study method will yield a case study narrative as a "final report." Regardless of research design, the report should clearly address the research questions.

Typically, an action research final report discusses the background and context of the study, research questions, data collection and

analysis, results, action(s) taken or recommended, visuals (charts, photographs, diagrams, etc.), and appendices. Reports should be clear and should provide "sufficient description to allow the reader to understand the basis for an interpretation" (Patton, 2002, p. 503–504). It is important to explain any limitations, inconsistencies, or difficulties that may have occurred in the data collection and analysis phases.

Other considerations for reporting are the expectations of grant agencies, university programs, or other stakeholders who may require certain kinds of information or formats. In the case of action researchers using arts-based methodologies, action researchers may want to consider using arts-based formats, such as websites, e-journals, exhibitions, performances, photo-essays, or other visual formats to disseminate research findings.

Bresler (2006) suggests that engaging in qualitative methods requires a "different set of ethical criteria" (p. 63) that includes not only care for the participants by "portraying them with complexity and dignity" (p. 65), but also showing care for the readership through the creation of research reports that can engage others in "dialogue on multiple levels—intellectual, affective and ethical" (p. 65). It is recommended that the data reporting process include an opportunity for all researchers, participants, and stakeholders to review and reflect on findings through *member checking*; this will enhance both credibility and confirmability.

## Conclusion

Action research supports "systemic processes of inquiry" (Stringer, Christensen, & Baldwin, 2010, xi) that involve "planning, instruction and evaluation" (Glanz, 1998, p. 219). It also requires an "inquiry as stance" (Cochran-Smith & Lytle, 2009, p. 119) that positions the role of a practitioner as central to the goal of transforming teaching and learning. The action research process begins with reflecting on one's practice, followed by a review of the literature; understanding links between theory, methodologies, methods, and aims; selecting a research design; crafting the research through the development of pertinent questions; and selecting appropriate methods for data collection and analysis relative to the research design and questions. While the action research process concludes with an "action" to be taken, these actions may also lead to new

lines of inquiry. The report and dissemination of research findings provides an opportunity for documenting the process, as well as further reflection on practice.

Action research is a dynamic and meaningful approach to examining pedagogy, student learning, program effectiveness, organizational culture, the visual and material culture of classrooms and schools, and the inequities that exist within sites of practice that include schools, communities, and organizations. While action researchers can utilize quantitative and qualitative methods of data collection and analysis, action research that is "qualitatively driven, visually oriented, [uses] mixed methods [and] interdisciplinary approaches" (Prosser, 2007, p. 27) can be very important for examining complex issues that are embedded in pedagogical practice and that subsequently rely on multiple forms of data.

The unique social and economic times we live in require that teacher-researchers be responsive and take on roles that extend and "deepen local work" and embrace "collective work" (Cochran-Smith & Lytle, 2009, p. 164). Outcomes of individual and collaborative action research may include the following: creating "cultures of inquiry" (Earl & Katz, 2006), initiating curriculum and school reform, developing cross-institutional partnerships, developing new models for teaching and leadership, developing case studies for professional development learning communities, and "connecting practitioner inquiry to transformative [equity and social justice] agendas" (Cochran-Smith & Lytle, 2009, p. 162). For novice researchers, collaboration with colleagues who share similar questions about practice may provide opportunities to "dive into" the action research process with a necessary network of support. For experienced researchers, action research can provide opportunities for mentoring, collaboration, and leading communities of practice.

## Key Terms

**Action research:** A systematic inquiry into practice; a research stance associated with the interpretive and qualitative research paradigm; also known as *classroom research* or *teacher research.*

**Action researcher:** A term used to describe a practitioner who conducts research in a school, community, or organizational setting with the aim of examining, understanding and changing practice; also known as a *classroom researcher* or *teacher-researcher.*

**Participatory research:** Action research informed by critical theory; the goal is to examine and create more equitable and just curricula, classrooms, schools, and working conditions.

## Activities

Individually or in small groups, complete the following activities. Share your responses with peers for feedback, and revise questions accordingly.

1. Develop three questions about your practice at this time.
    a. Are they related to pedagogy? Student learning? Organizational culture? The understanding of visual or material culture? Other?
    b. What theoretical framework(s) grounds your question(s)?
    c. How do the questions allow for "layered research" (Burnaford, 2007, p. 40) or the gathering of multiple evidences and data sources?

2. Using table 1.1, review research paradigms, theoretical frameworks, data collection methods, and methodologies.
    a. What research methodologies and methods best align with your research questions?
    b. What do you perceive to be some of the strengths and challenges of your selected methods?

3. The action research process includes multiple and overlapping stages that include the following: the selection of a topic and research design, the selection of methodologies and methods, the development of research questions, data collection and analysis, crafting the research, and reporting. Reflection and reflexivity are embedded in all of these processes. Visualize your proposed action research in a two-dimensional, three–dimensional, or time-based graphic, artwork, or other form of visual presentation. Present it to peers, collaborators, and/or advisers for feedback.
    a. How do you "see" your action research occurring?
    b. What have you included? What are your reasons?
    c. What have you not included? What are your reasons?
    d. How does the process "look" and "feel" to you?
    e. What additional questions do you have about action research at this time and what resources might you need?

## Note

1. The distinctions between arts-based research and ABER are discussed by authors Riddett-Moore and Siegesmund in chapter 6.

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# Chapter 2

# Interviews

*Faith Agostinone-Wilson*

## Introduction

Interviewing is a deliberate, informed conversation where the researcher seeks to understand how participants make meaning based on their own experiences. Along with the methodology of participant observation, interviewing is foundational to many types of qualitative research designs, in particular, case study research, where

> interviews are particularly suited for studying people's understanding of the meanings in their lived world, describing their experiences and self-understanding, and clarifying and elaborating their own perspectives on their lived world. (Kvale, 1996, p. 105)

In the tradition of action research, an interview is not simply a survey administered out loud. It involves being interested in who you are researching and viewing research participants as part of a conversation, not just as "informants" or "interviewees." By choosing to interview as a method, you are opting to do research in the qualitative paradigm, which is distinct in many important ways from quantitative methodologies. Seidman (2006) explains that students need to understand the theoretical differences between quantitative/positivist and qualitative/interpretivist paradigms before they undergo research using interviewing. A lack of theoretical understanding can often lead students to select interviewing (or even observational methods) because they seem "easier" to do than quantitative methodologies. You will want to refer to chapter 1 for a complete explanation of action research theory and the philosophical assumptions behind it.

Interviewing involves a long-term commitment involving scheduling presessions to address practical issues and participants' questions, reviewing and collecting permission/consent forms, multiple interview sessions, digitally recording the face-to-face interviews, transcribing sessions, and analyzing the transcripts. This translates into several hours for every thirty minutes of face-to-face time. When done correctly, interviewing can be as time consuming as it can be absorbing and enlightening.

Throughout the interviewing process, a researcher must have a deep understanding of research ethics, along with a constant awareness of important social differences that can impact research, such as race, gender, class, age, employment rank, and other social factors. It is important to realize, too, that interviewing data, like other qualitative methodological data, is not meant to be generalized to a larger population due to its arising from small, purposeful sampling rather than random or stratified mathematical sampling (Muijs, 2006). Neither is it meant to "prove" that one method works better than another, or that one teacher is more effective than another. The goal is increased understanding of and insight into a particular educational or classroom phenomenon (Creswell, 2007; Patton, 2002).

## Ethics and Interviewing

When most research students hear the term "ethics," they assume it applies primarily to informed consent and confidentiality. Yet ethical considerations run throughout the research study and can emerge at unexpected times. A researcher should always, to the best of her or his ability, anticipate possible places in the study where such situations are likely to come to the forefront. The preparation of your interviewing research design is your first experience with ethics: Do your study's goals contribute to a betterment of the human condition? Do the goals acknowledge participants as having dignity and rights, along with important information to share? A researcher's own role will also impact any ethical challenge; that is, in the action research paradigm, a researcher seeks to balance power with the participant who is considered more of a partner.

**Interviewing minors.** Action research projects adhere to the same rigorous ethical standards and guidelines as more invasive forms of research (such as medical), especially when people (subjects/participants) under age eighteen are involved. Before you begin interviewing, you must have a sound grasp of the ethical obligations of

interviewers. Unfortunately, enough years have passed that the historical significance of abuses of participants by researchers, such as the Tuskegee syphilis experiments (Jones, 1993), have made ethical considerations today appear to be an unnecessary relic or nuisance at best, and an example of overly sensitive regulation and censorship at worst. The language of the institutional review board (IRB) may sound harsh and bureaucratic, but its purpose is to communicate the importance of respecting the humanity of all research participants. Put bluntly, the IRB values participant rights above and beyond the rights of researchers to probe for information, since the participants are often more at risk if things go wrong. This does not mean that researchers' rights are not important; it is just that when conflicting rights occur, the IRB considers the participants' needs first, whether in medical or social science research (Mazur, 2007; Sales & Folkman, 2000).

In addition, teachers, coaches, camp counselors, and anyone else who works in an official capacity with minors are required by state law to report any suspected instances of abuse, which can violate researcher/participant confidentiality. Should a young person confess abuse during an interview or provide significant indications of abuse, a researcher would be compelled by law to report it to authorities. Using the transcripts afterward in a research report would be problematic.

**Understanding power dynamics.** Research ethics and human rights are necessary because of the dynamics of power in society. For example, researchers tend to be male, white, and come from more affluent backgrounds, though this is changing due to demographic shifts within higher education, along with the influences of postmodernism, feminist, and Marxist philosophies. Researchers are also able to tap into the mobility and prestige that go along with academic work. On a day-to-day basis, researchers from privileged backgrounds rarely have their motives questioned; they are assumed to be benign and neutral. Similarly, elite professionals such as doctors, lawyers, school superintendents, CEOs, and so forth are not generally the focus of research studies due to protective networks, specialized knowledge/technical terminology related to their fields, and an overall lack of access by the public.

Research participants, on the other hand, tend to be from groups with less power or ability to control the material reality of their situations, such as children, minorities, women, and workers from lower-income households. These groups are easier to access, and less oversight is provided once access is granted (prisoners being notable

exceptions). Gamradt (1998) discovered this dichotomy when she encountered administrative gatekeeping and other difficulties gaining access to a group of highly paid surgeons in order to conduct ethnographic research in a medical teaching setting. Even when elites are studied, it is usually done by a university researcher or outside group, not by those from lower professional ranks.

## Gaining Access: Formal and Informal

While gaining formal access might not be as much of a challenge to most researchers with university credentials, it is the informal access that matters, that of the participants themselves. Informal access refers to the ability to not only enter a research setting by obtaining permission, but to develop positive interactions with participants in that setting. In the case of interviewing, some people might be suspicious of researchers in general. The very method of interviewing itself might cause curiosity ("Why do you want to talk to me?"), whereas a survey seems more comfortable, familiar, and acceptable.

You might find that it takes a lot more time to gain informal access to a site, especially if you represent a group that, in general, has more power within society while approaching a less prestigious group in order to gain information. For example, if you are a white male K–12 administrator conducting research with teachers in an ethnically diverse elementary school, you possibly represent racial and gender privilege along with hierarchy. Historically, administrators and teachers have been on opposing sides of labor issues, to name one key differential. The teachers in your study might not immediately allow informal access for these reasons. Smith (1998) describes in great detail how her own gender and ethnicity as an African American assisted her in gaining access to an African American beauty salon in order to interview and observe customers.

The advantage of planning an interviewing study involves potentially learning not only about the participants, but also about how our own backgrounds enable us to gain information about larger societal issues that we might not have noticed before. Without the ethical imperative, we would miss out on such essential knowledge because it would be taken for granted. Researchers tend to get caught up in the conversational aspects of the interview without analyzing the social dynamics behind the interaction. Ethics forces researchers to consider this.

**Authorship and interpretation.** Other ethical issues to consider when interviewing involve the extent of a research partnership. When you finish transcribing an interview session, you should share the transcript with the participants so they can review what was said; this is known as *member checking*. In some cases, participants might be able to provide clarification that can be noted in the final written report of your study. If participants grow nervous that they might have said something inappropriate during the session that could upset their boss, for example, they have the right to request that that particular quote be removed. A researcher should always be prepared for this situation to arise. This is another sound rationale for interviewing several participants rather than relying on just one or two.

When it comes to the final analysis and creation of themes that emerge from the interviewing process and data, the ethical dilemma of authorship and interpretation may often arise. A participant might question the inclusion of certain quotes. If so, does he or she have the right to request that the quotes be removed? How much input or control do participants have over the researcher's assertions and interpretations? This becomes more of an issue if the researcher's analysis might place the participant in a less-than-flattering light.

For example, suppose a researcher conducted a series of interviews about the pedagogical styles of elementary school teachers. Part of the interview included asking teachers about their own pedagogical philosophy. The plan was then to analyze the transcripts to create pedagogical portraits of the different styles. In all of the interviews of this hypothetical study, the teachers expressed similar beliefs mirroring constructivist and discovery learning theories, emphasizing a student-centered approach as part of their philosophies. Yet, upon further analysis of the transcripts, the researcher finds a mismatch between stated constructivist beliefs and more authoritarian, teacher-centered practices that come forth in the transcripts. If the same researcher used participant observation and found even more confirmation for the mismatch, this could lead to a major ethical dilemma. Now the researcher has choices to make: Does she or he refrain from reporting on the mismatch, which was an unexpected yet information-rich discovery? What if the researcher decides to situate the mismatch in terms of institutional pressures placed on elementary teachers (such as high-stakes testing negatively impacting more child-centered practices), unknowingly leading them to use more authoritarian approaches? A researcher could use this interpretation as a way to illustrate how teachers might want to teach one way but are not able to for a variety

of reasons. This could be further explored through follow-up interviews, or even a subsequent research project.

**Ethical considerations in selecting participants.** Because many action researchers are also full-time teachers and workers with hectic schedules, the temptation exists to interview people they have a close relationship with and automatic access to, such as coworkers, friends, students, neighbors' kids, and family members. While action research theory does allow for interviewing these categories of participants, there are some pitfalls to consider.

First, if you plan to interview people who are subordinates, the dynamics of power can impact responses and color the entire process. In the case of research, a subordinate would include anyone whom you have authority over, such as students and employees. A teacher has the power to assign grades and issue disciplinary procedures such as referrals. A principal or superintendent can hire and fire teachers. An employer can also hire, fire, or demote employees. It may be more natural, then, for students and employees to tell a researcher, who is also their teacher or boss, what he or she wants to hear. Fryer (2004) encountered several dilemmas resulting from her conducting research as a PhD student, curriculum coordinator, and longtime resident in the community where her school was located. Initially viewing her position as researcher/practitioner as an asset, Fryer eventually realized it created some difficulties and concluded that the drawbacks far outweighed the benefits.

There are also problems of conflicting confidentiality when a teacher or employer is also a researcher. Tickle (2001), a teacher educator, conducted an action research project involving his preteaching and first-year placement students. The conditions of the study included mutual openness about the student-teaching and first-year experiences so as to better record and analyze the lifeworlds of new teachers. In two of the cases outlined in the article, both students had requested an absolute degree of confidentiality about negative events happening with supervising teachers during their placements, violating the terms of the study. Yet Tickle felt that the information his students were withholding was too important for him not to intervene as a teacher educator on behalf of maintaining an effective placement process for future students. Making the problem worse, the mentor teachers that the students were having difficulty with were eventually identified (despite efforts at anonymity) in the research report by coworkers; the report was ultimately withdrawn.

This illustrates how a researcher should carefully reconsider conducting interviews if he or she serves in a capacity of authority, especially if the study's topic is sensitive, or if potential problems could emerge. It would be wise to conduct interviews in another school district or location where direct authority is not an issue.

Interviewing friends and family is often fraught with problems. It can be difficult to maintain a scholarly and analytical focus while talking to people you may have a history with. There is also the temptation to assume you "understand" what they are saying; deeper, introspective analysis may often be lacking in these kinds of interviews. If a researcher discovers negative themes in the analysis of transcripts, more is at stake than would be the case with participants who are not as well known. Pressure would exist not to publish the research in order not to upset other family members. Friends could reveal personal information that, if published, even with the best in ethical precautions for confidentiality, would indicate their identity. Often friends and family members tend to broadcast about the research study to other relatives and friends, creating pressure to conform to "niceness." They may not understand the intellectual nature of interviewing and see it as simply another conversation. If the researcher chooses to publish the study, she or he can end a friendship or alienate her- or himself from family members.

After considering the risks of interviewing people you directly supervise (minors or adults) or friends and family, some self-reflection and honesty are necessary. It is important to acknowledge that these groups are often chosen as interview participants for the qualities of perceived ease and saving time rather than considering the needs of the study. There is nothing wrong with admitting fear of the unknown. Approaching potential participants and unfamiliar sites can cause a lack of confidence, especially with an intensive method like interviewing. However, if you are well versed in the purpose of your study and the theories framing it, the process of obtaining access will be a positive one. You will find it easier to communicate about your proposed study in a more natural manner to potential participants. Individuals will respect your intentions and the fact that you are willing to go into an unfamiliar setting.

To conclude, it is important to never assume that you can maintain appropriate confidentiality and analytical distance when conducting research with participants you supervise or know very well on a personal level. Even friendly relationships in the workplace do not overcome the coercive nature of such settings. Many IRB committees

are highly critical of study proposals involving these situations, even within the framework of action research.

## Preparing for the Interview: Theoretically Framing Your Topic and Guiding Questions

One of the more difficult aspects of interviewing is framing your topic and the types of questions you will ask. Often the concepts of traditional scripted question-and-answer interviews that we have seen in the media get in the way, blocking the development of the interview before it occurs and as it happens. Remember that you are not conducting an oral survey where a topic and a list of questions serve as your script. Much of the action research process involves cycles of reflection and interpretation, so the "collect everything and then analyze at the end approach" does not apply in qualitative research, especially in action research methodologies. Instead, you will want to conduct multiple interviews in order to facilitate the continual gathering of data, analysis, and reflection that is essential and ongoing.

Your topic should allow for this process to happen rather than provide barriers to it. For example, a typical research topic question such as "Does outdoor education enhance student motivation?" though broad, limits a researcher to a yes-or-no response that could probably be answered much more quickly by a trip to the campus library and a standard literature review. Instead, this research question should be further developed like this: "How do nature studies impact the socioemotional motivation of school-aged children?" You want a topic that will also lend itself to participants' "taking action" and making important changes in the research setting. This means that your topic and the interview questions should maximize participation so that you can gain insight into what is happening in a particular setting.

The use of theoretical framing in qualitative research is standard practice (Creswell, 2007; Denzin, 1989; Kvale, 1996; Patton, 2002; Seidman, 2006). According to Denzin (1989), "Theories serve as critical guides to future thought, research, and conceptualization" (p. 67). An essential part of the action research process, understanding theory at the preparation stage will aid in making sense of the interviewing process and data analysis. A solid theoretical knowledge base will help with establishing categories of a particular phenomenon for

analysis, shape what you should look for during an interview, and provide clues in the form of a road map.

Sargeant et al. (2006) used social learning, humanist, and constructivist educational theories to frame their interviews with doctors and their experiences with online learning as a form of continuing education. The researchers wanted to consider the factor of face-to-face interaction that is often a challenge with online platforms. Using the learning theories at the heart of their study, they found that the role of the online facilitator was essential based on the interviews of medical professionals. The findings might have been different had this just been a study to assess general attitudes about online learning.

Muchmore (2000) situated his life history study of a teacher using narrative and phenomenological theories and methods. Following these methodologies demanded that the researcher constantly reflect on the process of the life history and led him to identify several problems inherent in interviewing, especially ethics, which he recorded as part of the study. So, in a sense, the theory also drove the structuring of the research report. Rubin (1992) conducted several in-depth interviews with working-class families to create a portrait of the home life conditions of this sociological group in her classic work *Worlds of Pain*. She chose to look not at just one aspect or only interview the male breadwinners. Instead, using a feminist research paradigm, she also talked with the wives of the workers about an array of more personal topics.

Theoretical framing will impact the selection of participants, which is a purposeful act, not a random one (Polkinghorne, 2005). The key is to locate participants who will provide meaningful information and insights relevant to your research topic. At the same time, researchers do not want to choose only people who they think will say what they want to hear. Nor does a researcher want to preselect themes and then find interviewees who will conveniently express sentiments fitting those preselected themes. Just as researchers would not want to use closed-ended questions as the sole basis of an interview, they do not want to choose the "right" people, a concept often influenced by race, class, and gender bias.

To summarize, you want to focus on creating open-ended questions that will maximize the potential for participant response and rich data. Remember that your initial research protocol will evolve over time as you gain more experience conducting interviews. It is very common to adjust your questions as you proceed. For example, you may notice that different participants might be bringing up

similar issues that you might not have addressed in your protocol. The reflective cycle of action research facilitates the adjustment of interview questions throughout the process.

## Practical Considerations

In addition to the analytical and reflective components of action research interviewing, there are also several practical, day-to-day factors to consider. These include your available time commitment, the selection process for your interviewees, working with special populations, interviewing children, arranging meetings for conducting the interview(s), using technology, developing and posing questions, conducting multiple sessions, in-depth and follow-up interviews, and conducting the interview(s).

**Time commitment.** As you consider interviewing, you may have to examine your own limitations and ask yourself if the research project is something that is doable in the time frame you have allotted. Most student action research projects are done the final year of a master's degree program, which takes approximately two years for most people. Students and practitioners tend to collect data in the fall and spring and do their data analysis and reporting in the summer when they are not in the classroom. School-age program instructors would follow a similar schedule. Camp counselors might have an even narrower window for data collection during the summer, with write-ups in the fall or spring. Many education workers hold more than one job, so that has to be taken into account as well. The key is to challenge yourself intellectually, not structurally! There is nothing wrong with foregoing a topic, or a method, because it is not practically accomplishable.

**Selecting interviewees.** Regarding interviewees, there is no such thing as the perfect interviewee. In many respects, interviewing is much like teaching or coaching. If you inadvertently select a more challenging participant—for example, one who is unresponsive; gives short, disconnected answers; or insists on talking about unrelated topics—it is your responsibility as an interviewer to find strategies to make the interview successful. This could include improving your own conversational skills by adding more follow-up and probing questions or observing body language more closely for signs of resistance or discomfort. You can also avoid the problem of the "difficult" participant at the start by doing a sound job of carefully selecting

your participants and not jumping to the conclusion that your friends, coworkers, subordinates, or your own students will make for an easier interviewing experience.

***Interviewing "special" populations.*** If you are interviewing people who do not speak English as a first language, an interpreter may be necessary. You will need to exercise caution, however, so that the interpreter does not try to explain or frame the question to the participant, thus turning an open-ended question into a leading one. Holding a preliminary meeting with just the interpreter present is a wise tactic so that you can review the basic concepts behind action research interviewing and the need for participants to reveal their own meanings as much as possible through their answers. The interpreter can also explain any unusual features of a language, such as slang, idioms, or special phrases so that you can plan ahead in the way you word the interviewing questions to avoid confusion. Those interviewing K–12 students or adults with special learning needs should consider premeetings with family members, individualized education program (IEP) committee members, therapists, learning specialists, or other professionals with expertise and personal experience working with these individuals. The same risks for turning open-ended questions into dichotomous ones exist when special educators or even well-meaning family members try to interpret statements for their clients or loved ones. By consulting with family members and professionals beforehand, you can gain understanding about any cognitive or physical adaptations needed before the interviews commence.

***Interviewing children.*** Children also perform better in interviewing situations when they have toys to play with, clay to knead, or drawing materials, so they can talk while engaging in different tasks. Often their commentary during this sort of play can be very illuminating, and it helps more active/physical learners to focus. Using prompts such as "Draw a picture of yourself when . . . " or "Write down two words that describe how you felt when . . . " is a good idea with teenagers, to put them at ease. Elbers (2004) describes how the developmental level of children can impact how questions are perceived. What is usually thought of as a "deficit" in understanding on the part of the child is actually a form of "conversational asymmetry," where the adult is asking one thing and the child tries to meet adult expectations from her or his vantage point. This is especially common in situations where a stranger who is outside of the usual context of an adult–child interaction interviews a child. In short, do not assume that the child shares your intent or interest when an interview question is asked.

**Arranging meetings.** Arranging preliminary meetings is often overlooked. Many researchers assume that an extra meeting will waste a participant's time, but this is not the case. Much time can be saved by a thirty-minute preliminary meeting where all aspects of the interview study can be presented and questions answered. Setting up your preliminary meeting in a neutral location (with food) will allow you to provide an approachable presence along with important information about your study to potential participants so that they can make an informed decision to take part in the research study. This will go a long way toward setting the stage for a successful interview before you ever hit "record" on your digital player. If potential participants suggest that you stop by their workplace to conduct this initial meeting, say that a neutral place is a must. You could also explain that conducting interviews at workplaces inevitably entails interruptions and distractions, especially if the place of work is a school. Note that participant observation has the opposite requirement, as it is done in the day-to-day home, school, or workplace settings of participants. If your study involves both methods, you will need to explain the importance and rationale of each unique research setting to potential participants.

**Using technology.** Regarding technology, it does not hurt to do a test run on your digital recorder during this preliminary meeting to work out any potential problems with equipment. This will also help the participant get used to talking while being recorded. You can make a transcript of this preliminary meeting to practice your skills as well as to make note of any interesting themes that emerge. Note that downloading audio files is now much simpler than in the past. Look for digital recorders that come with their own software that is labeled PC or Mac compatible for making MP3 files.

It might be tempting to assume that because you are using a digital recorder you do not need to take notes. This is incorrect. View digital recording as a means to free you to make observations on paper about participant mannerisms, emotions, levels of discomfort, or any questions to ask as you react to what is being said, especially if your interview is more emergent in style (Kvale, 1996; Seidman, 2006).

While e-mail interviews are one solution to the issue of distance, they are not the most desirable option because you can miss out on all the subtleties of voice and body language that take place during an interview in real time. With the advent of voice over Internet protocol (VOIP) technologies such as *Skype*, distance interviewing in real time and with video is now a possibility and quite cost effective. Audio

files can be created either within *Skype* itself using software that can capture phone conversations, or by simply placing the microphone of your digital recorder next to your computer's speaker to obtain the audio file of the exchange.

**Developing and asking questions.** Since action research embodies qualitative research methods, it is nearly impossible to plan ahead 100 percent when it comes to writing and asking questions. Things might change during the course of the interview, requiring a different set of questions or more probing types of questions to be asked. Yet engaging in a totally open-ended interview is extremely challenging for beginning researchers who are just starting to learn about the conversational give and take of the process.

As a researcher, you have to be both confident in your study's goals and your interpersonal skills, especially enhanced listening techniques. New researchers often struggle with both. It is because of these challenges that it is recommended you come to the interview with a prepared list of tentative questions. For one thing, you will be better able to provide an overview of topics and questions to potential participants. The same list of questions can be submitted to the IRB as part of a research proposal's informed consent procedures, which typically goes into the appendix of the report. By listing a series of questions, you can partly ensure that all of your research goals and subgoals will be touched upon during the course of an interview. This will allow your attention to be directed to monitoring the flow of the interview rather than worrying about coming up with questions on the spot.

A helpful guide for an initial interview should feature a few questions that start from the more general and move to the more particular, getting at what you want to know. The general questions should help the participant adjust to being interviewed and build a level of comfort that facilitates deeper interaction. Questions should be open ended unless you are establishing basic facts or need direct information during the course of the interview. Your questions should also be structured to gain the richest information, but not in a way that overly shapes or determines the interview experience. After completing your initial interview, you can jot down some follow-up questions for the next session. Brooker (2003) chose to use ethnographic methods (including interviews) to research how parents of four-year-olds from diverse cultures viewed learning in the home. To assist in planning for this complex project, Brooker decided to break the study up into four concepts that would impact how she framed the questions she asked

the parents: beliefs about childhood (roles/relationships), beliefs and practices about how the home should function, beliefs about the purposes of literacy and speech, and beliefs about children's learning (p. 122). Organizing your research questions into different subcategories could be a useful strategy for assisting with future interpretation and analysis.

As you gain more experience, you might want to try a more grounded theory approach, where theory comes from emergent data rather than the other way around. *Grounded theory* (Strauss & Corbin, 1998) is a qualitative research method that works from the data up, rather than starting with an existing theoretical framework, though many grounded theory researchers do consider existing theory as they undertake a study. This particular methodology allows action researchers to revise interview questions during the process.

Patton (2002) has some wise advice concerning questions. He explains that asking "why" questions can be confusing for participants because it makes them choose between their opinion and possible rationales based in fact. Consider the legendary exchange between Willie Sutton, the famous bank robber, and a reporter. When the reporter asked, "Why do you rob banks?" Sutton replied, "Because that's where the money is." Instead, researchers should transform "why" questions into "explain to me how" questions, thus focusing the participant's efforts on laying out their thought processes and yielding richer data.

In a similar vein, dichotomous (yes/no) questions are the bane of interviewing and the reason why people tend to run from surveyors at the mall to escape impending boredom. Patton (2002) explains that, inevitably, whenever he encounters a struggling research student, he finds that his or her interview transcripts consist of one dichotomous question after another, providing little to no data of any use. A quick way to test the value of your data early on is to examine your transcript after an initial or practice interview. If you find you are doing more talking than the participant, chances are good that you are asking too many yes/no questions. Another test you can try is to only read the participant's answers, excluding the interviewer's questions. If the participant's answers seem choppy and isolated, you are asking the wrong kinds of questions. You should be able to generate a data flow just from the participant's answers alone.

In general, leading questions are to be avoided. They often intimidate participants or make them feel that something about the goals of the study is being left unsaid and that they had better conform to

what the researcher wants. The responses would then be suspect. If a researcher is interviewing coworkers or subordinates in an action research study, the use of leading questions can distort the participants' answers coming from an already precarious situation in terms of distribution of power.

**Redirecting interviews.** In some cases, an interviewer will have to step in to refocus the direction of the interview, or to handle a participant who likes to talk. Patton (2002) provides several suggestions on how to politely intervene when an interviewee talks excessively, such as telling the participant, "Let me stop you here for a moment. I want to make sure I fully understand something you said earlier" (p. 377). The interviewer would then ask a more focused question to bring the interview back on track. Also consider the IRB's stance on protecting the rights of participants. Their right to not reveal sensitive information takes precedence over your right to press for this information, no matter how important to the study. If after several attempts over multiple meetings the participant still does not want to reveal such information, you will have to cease your efforts in this direction.

**Conducting multiple-session, in-depth, and follow-up interviews.** In-depth interviews take place within a variety of time frames. A lot depends upon the age of your interviewees, the topic at hand, factors such as fatigue or emotional distress, and the level of openness that people display, which can change from day to day. Adults can manage forty-five minutes to an hour and a half, though three-hour interviews are possible. With young children, interviews longer than twenty or thirty minutes are not advisable. Instead, aim for several shorter interviews over the course of six months to a year.

Remember, too, that multiple interviewing sessions are ideal. It is extremely difficult to fully capture the nuances of viewpoints in one session. The most effective studies feature multiple sessions rather than one-time meetings. One-shot interviews will call a researcher's integrity and the framework of the study into question. If interviewing is the only form of data one intends to collect, the data that a onetime interview session yields is most likely to be inadequate for a thorough analysis later on, no matter how many participants are interviewed. Researchers are bound to become frustrated when a reading of transcripts from single interview sessions cannot indicate important and necessary themes for analysis and interpretation. Related to this is the tendency of new researchers to interview only people they know personally or are comfortable with rather than representatives of all the stakeholders in a particular setting. For example, in evaluating an

after-school program, only interviewing one teacher and one student will not result in rich data.

Researchers should therefore consider interviewing a range of students; multiple teachers, parents, and staff; and members of the community over a series of multiple sessions to gain a better sense of expectations of a successful after-school program. Otherwise, one runs the risk of "shaping" the data to fit what is important to one's own assumptions (Kvale, 1996; Seidman, 2006). Then, even if one has selected excellent representative interviewees, there are the common pitfalls. These include interviewers believing they know what participants are thinking, or participants themselves indicating that they understood what was said when they did not, so as not to appear ignorant (Denzin, 1989). A one-shot interview will increase the likelihood of these pitfalls occurring.

Multiple sessions will allow you to complete one round of transcription and analysis before returning to the same participant. If more than one person is conducting the interviews, such as for a program evaluation, this will provide a chance to meet with each other to cross-check your transcripts for similar themes and to establish validity before proceeding further. It will also help you to build confidence in your skills as an interviewer to complete one session and reflect upon the experience.

It is the researcher's call as to whether scheduling a follow-up interview is necessary or not. As you gain more experience interviewing, you will be able to immediately step in and ask additional clarification questions during an interview. In general, if during data analysis you end up with more questions than emergent themes, you may want to consider contacting the participant for a follow-up session—further illustrating the importance of immediate transcription and examination of data. To be safe, you should always anticipate a block of time for follow-up interviews and inform all participants as to their possibility. That way you won't be inconveniencing participants any more than necessary.

To summarize, do not rely on just your interviewing prompt to get you through—you need to be constantly thinking of meaningful subquestions, segues, areas of opportunity, and other strategies to make the most of your short time together. The questions you draft ahead of time are meant to be focusing devices, not a script, though beginning researchers' transcripts will most likely appear more scriptlike or call-and-response in style. Over time, you will become used to the conversational flow of in-depth interviewing.

Considerations for framing the type and frequency of interviewing sessions are determined by the study design and the populations interviewed. For example, a narrative research (biographical or oral history) design requires several in-depth, hours-long interviewing sessions, because people do not typically relate their life stories in a tidy, chronological order. It is the job of the researcher to put the stories together into a cohesive narrative, with a beginning, middle, and end. However, this format has been questioned by feminist and critical race theorists as having a Western bias, and it is ultimately just one of many ways to represent participants' experiences (Riessman, 1993).

## Transcription and Analysis of Interviews

**Transcription.** The transcript represents the bulk of your data. If you did not take care to ensure that your participants created their own meanings in their responses to open-ended questions, the transcription and analysis phase will be all the more arduous. Interviewers who rely on dichotomous questions will soon realize that their transcripts are virtually useless. Also, failing to transcribe and analyze after each interviewing session (doing your transcription and analysis all at once instead) will create a last-minute situation where it will be too late to schedule follow-up interviews or to locate new participants should your transcripts yield little.

At this stage, one cannot overstate the necessity of having a solid and confident understanding of the theory, rationale, and plan of action behind your research study. The sheer amount of hours that go into conducting, transcribing, and analyzing just one 60-minute interview can be overwhelming. To not have the ability to place the transcribed text of an interview into a methodological context will lead to weak conclusions, if any. It will make your final write-up an impossible task. So it goes without saying that a theoretical understanding should run throughout your research project from the planning phase, through the interviewing stage, to the transcription, and especially during the final analysis. The integrity of your study design will also be tested during this final phase of your research. Designs relying too much on convenience samples will start to show through in the form of glaringly weak, uninformative transcripts.

Equally important is the development of a schedule so that you won't be faced with a stack of transcripts to work through at the end of your project, when you are likely to be the most fatigued. If

you approach analysis as an ongoing task across multiple fronts, your mind will be fresh and open to new discoveries rather than being occupied with finding "juicy" quotes to prop up some ill-conceived, last-minute themes. Try to complete your analysis as soon as possible after you finish transcribing each interview.

When you first transcribe an interview, try to adhere as closely as possible to the grammar, sentence structure, accent, and use of pauses, laughter, and body language. If after showing the transcript to the participant, she or he seems puzzled at how her or his conversational patterns look in print, you might ask if the participant wants you to remove the pauses and unique accent/language indicators when the quotes are used in the research write-up, while leaving the original transcript intact. You will not be altering the meaning of what participants are saying, just aligning grammar and sentence structure to what is considered "correct" written form. People vary in terms of their comfort level with representations of authentic speech patterns. Those interviewing people with speech impediments or other special considerations need to be particularly sensitive to this issue by respecting the wishes of participants and their families. In some cases, both forms are used side by side when quotes are featured in a write-up.

At most, you probably won't be able to handle more than a sentence at a time when it comes to playing back MP3 files. Do fifteen or twenty minutes at a stretch and take a break. At the same time, do not wait too long to transcribe so that you can utilize your interview notes to enhance the transcript when it is finished, as part of your analysis. When you finish transcribing, play the interview back from the beginning, take your hard copy of the transcript, and read along. If you notice any errors, stop and make corrections on the spot. Even after obtaining a transcript, you still want to hang on to the MP3 files. You might want to replay them to hear the original interview, including voice inflections, your own skills in asking questions, or other human features that are not captured on paper. A good interviewer constantly returns to his or her data during the process of analysis.

**Analysis of transcripts.** As Polkinghorne (2005) asserts, evidence is not a column of numbers or transcribed words from an audio recorder but "meanings represented in these texts" (p. 138). Data has no significance apart from interpretation, so the researcher's own analysis is essential. Often this is the most difficult aspect of the interviewing process because it requires *comparing and contrasting*, juxtaposing different participant responses and themes with each other; *synthesizing*, understanding your research in light of other research and

theories; and *evaluating*, systematically approaching the transcribed texts of interviews, deciding which themes have the most merit and which are most justified, and tying themes back to the data you have collected beginning with the transcript.

With a transcript in hand, the first part of analysis involves open coding, where you highlight any statements of interest that will become themes. These themes are used in different ways and in some cases are arrived at through a variety of processes. It is common to run through a transcript several times to isolate distinct themes. Then, when other interviews are conducted and transcribed, they are coded in a similar way, and the themes coalesce into a narrower list. Sometimes new themes emerge. It is important that the themes have boundaries and do not overlap too much, though they may relate to each other on a variety of factors. For example, suppose after open coding you come up with the following list of possible themes: control, insecurity, uncertainty, jealousy, awareness of others, and wanting to be in charge. These themes overlap, so combining some of them is in order: "control" and "wanting to be in charge" could be one theme, "jealousy" could be one aspect of "awareness of others," and "insecurity" and "uncertainty" could be called something else, uniting both concepts. Too many themes that overlap can result in a lack of cohesive analysis. The easiest way to deal with this situation is to transform overlapping themes into possible subthemes of other, larger themes.

On a first run through of transcripts for data analysis, circle any words or phrases that stand out to you, making notes in the margins of what they could be labeled. Over time, you'll see these items of interest converge into larger themes. One of the easiest ways to code transcripts at this point is to assign a color to each larger theme and then highlight any quotes that match that theme. This is also a visual way of discovering that your themes may be overlapping too much and that you might need to rethink categories to make them more discrete.

Researchers use many techniques to analyze data, and these are related to their study designs and theoretical frames. Olsen (2006) examined transcripts from sixty-four interviews with eight teachers using sociolinguistics as a method of analysis for looking at the experiences of educators. Sociolinguistics involves looking not for general themes, but for assumptions the researcher can make that are embedded within people's language patterns. Olsen proceeded to take excerpts from his interview sessions and make inferential assumptions about the teachers' meaning making. This was done by closely examining transcripts and audiotapes of interviews to look

for double meanings, such as with the pronoun "you," which can be used differently depending on intent. In sociolinguistics, the presence of the interviewer is taken into account as the conversation proceeds. Talking with a researcher would be different than a colleague, as in the case of a teacher who immediately asked Olsen if he had any materials on teaching grammar in response to his comment on how students did not usually like being taught grammar skills.

McCarty, Romero, and Zepeda (2006) analyzed transcripts from interviews with indigenous Native American students to create counternarrative perspectives from the viewpoints of tribal language speakers who were in the process of learning English. These perspectives went beyond simply recording the responses students gave to the process of language acquisition. The researchers wanted to document the process of "language loss" as the students acquired English, the implications of which would be used to help form language policy for Native Americans. Four initial research questions formed the codes later used for analysis: (1) What role does Native language play in the personal, familial, community, and school lives of Native American youths? (2) How does language loss and revitalization influence how well Native youths perform in school? (3) What can we learn from Native youths and adults that might inform tribal language revitalization efforts? 4) What are the lessons for state and national language planning and policy? (p. 30). Here we have a form of analysis that uses predetermined research questions to inspire coded themes.

Some researchers use the theoretical framework of their study as a way to critique the existing use of interviewing methodology. Using a postmodern frame, Lincoln (2001) argues that the traditional qualitative value of rapport during an interview may not be as solid as once perceived. She analyzes the method itself for inconsistencies in understanding between researcher and participant with regard to assumed consensus, which is part of rapport. In the case of rapport, Lincoln views the overarching project of colonization as making it impossible to truly establish equality between researcher and participant in traditional ethnography. However, Lincoln suggests that more participatory forms of research, such as action research, can help to create the conditions for equality.

## Reporting and Disseminating Findings

Researchers often grapple with the problem of how to best represent their findings in the research report. There are several strategies,

and much depends on your design and theoretical framing (Creswell, 2007). Narrative research is often presented in storytelling form, usually with the narrative account appearing first, followed by the author's interpretation, which refers back to the account by featuring excerpted quotes. Case studies also feature the complete case description first, followed by thematic analysis. You can also introduce your major coded themes, explain each theme in detail, and then present a quote or multiple quotes that illustrate the theme. This is probably the most common and straightforward method of reporting interview data and is used by both beginning researchers and professionals such as Rubin (1992). A danger with this type of reporting is that it can appear wooden and laundry-list-like as the author cranks out each theme. To remedy this, some researchers use a hybrid of narrative and thematic reporting so that instead of distinct themes, each with its own heading, they are interwoven as a larger piece of text. In all situations, it is important to tie your analysis back to your study's original research questions. In some situations, the research questions themselves provide the reporting framework, as in McCarty et al. (2006).

Reciprocity is an important value for the IRB and part of ethical conduct in interviewing. In the case of interviewing children, parents and guardians are often delighted with having a one-on-one video or audiotape of their child. If you are doing oral history research, families would love to have a copy of the entire study for their own use, especially if photographs are part of the study. Evaluation researchers can be assured that all parties involved would enjoy a carefully constructed, thoughtful research study printed and distributed in a prestigious journal that they can display on their bookshelves.

## Key Terms

**Closed-ended questions:** Interview questions that are structured to result in participants providing only a yes or no answer; also called "dichotomous questions." Also includes questions that result in one- or two-word answers. Closed-ended starters include "Do/did you," "Can you," "Are/were you," and "How many years did you."

**Convenience sample:** In qualitative research, this refers to selecting participants based solely on geographic proximity, personal familiarity, workplace acquaintance, or some other factor that makes it easier on the researcher for data collection. These qualities then supersede

other rationales for participant selection, often to the detriment of data analysis and findings.

**Member checking:** Presenting participants with a verbatim transcription of their interview session so that they can verify the contents and have an opportunity to comment on or even delete certain passages.

**Open-ended questions:** Interview questions that are structured to encourage participants to provide longer, richer answers. Possible open-ended starters include "How," "What," "Describe when you…," and "Recall how you felt when …."

**Protocol:** A list of general topics or specific questions to be covered during an interview that a researcher creates prior to a live interview. Protocols can be as open-ended and simple as a series of bulleted points to be checked off or as complex and directed as several questions with sub- and follow-up questions, resembling a script.

## Activities

This three-part activity is meant to provide students and practitioners with an introduction to the interviewing process, which includes preparation, interviewing, transcription, and analysis. Please note that a research study featuring interviewing would be much more in depth, and the three phases would be interconnected, as discussed throughout this chapter. Readers are encouraged to refer to the relevant sections of the chapter prior to participating in these activities.

1. **Framing and Creating Basic Structural Questions for an Open-Ended Interview**

**Recommended time:** Twenty minutes for writing questions, fifteen minutes for group critique.

a. As a group, select a general topic to explore that could apply to all students in the class. Such topics could include "life as a graduate student" or "being a new researcher." Then select a theoretical framework to further refine the topic, such as feminism, critical theory, disability studies, or queer theory.
b. Once a topic and framework have been selected, break into two subgroups. The first group will be responsible for creating five guiding questions based on participant background and history. For example, if everyone in the class is an educator, your group would be responsible for writing questions related to the teaching profession in terms of daily workplace scenarios, what led people to become a teacher, and so forth. The second group will take on the

task of writing five guiding questions that address existing conditions/situations related to the chosen topic. For example, if your topic were the impact of standardized testing, your group's questions would address elements of testing in the classroom.

c. Refer to the "Preparing for the Interview" section (pp. 28–30) of this chapter prior to constructing your group's questions.
d. Post each group's questions on a large sheet of paper, whiteboard, or online discussion board so everyone in the class can view it at once. The format should be easily viewed to facilitate editing by the group as a whole.
e. As a class, use the following prompts to critique the questions:
   - How do the questions align with the overall topic and purpose of the interview? If not, how might the question(s) be framed better?
   - How are the questions informative? Will they yield rich data? Give some examples.
   - Are any of the questions yes/no questions? If so, how could they be revised?
   - Does a particular question work with the other questions as a group? If it is very different, justify its inclusion with examples.
   - Is the language easy to understand, not just for the researcher, but also for the participant? Could it be reworded for clarity?
   - Are any of the questions not open-ended? If so how could the questions be rewritten to be more open-ended?
   - Are any questions too threatening or leading?
   - Do any questions seem redundant?
   - Considering the context of the interview and who will be participating, is it bias free? Would there be any examples of it not being bias free if the background of the participants changed?
f. Based on the class critique, rewrite any questions. The idea is to foster a spirit of reflection and careful analysis, as well as clearly stated questions that align with the theoretical framework. As with all critiques of work, avoid personal criticism or attack.
g. All of the groups should gather together to decide as a whole which questions from each of the groups should be included in a "final list" of interview questions. Criteria for inclusion should include relevance of the questions regarding the theoretical framework, clarity, and the potential for questions to yield rich participant responses. The resulting list of questions generated from this activity session will be used in the following activity.

2. **Interviewing: Conduct an Interview with a Classmate**

**Materials:** Questions from activity 1, digital recorder, paper and pens.

**Time:** Fifteen minutes per interview; thirty minutes for a pair.

a. Get into pairs (a single group of three is acceptable for odd numbers). Pairs should be randomly selected. It is recommended that people from the same workplace, district, or program not pair up if at all possible.
b. Do a quick equipment check with the digital recorder. Watch for volume settings and test out different speaking distances from the recorder.
c. Refer to the "Developing and Asking Questions" section of this chapter to go over basic protocol before proceeding.
d. It is very important that each participant take turns asking the same set of questions from start to finish. This will provide each of you with a better sense of the interviewing process and special challenges that can arise as personalities and the roles of the interviewer/interviewee combine. Avoid the temptation to save time by taking turns per question. If you both answer each question together, the risk of following the lead of a more outgoing personality can occur, along with a lack of distinction between sets of transcripts later on.
e. Right after each participant completes his or her 15-minute interview session, immediately jot down your impressions of the experience of interviewing. Do not talk to each other or try to collectively interpret; just write down your initial thoughts as to how the session went experiencing both interviewer and interviewee roles. Highlight the difficulties of each role. Do not share these until the next activity.
f. Save your immediate impressions and audio recordings for the final phase of the activity.
g. Play back the audio recording to ensure that it is audible and complete. If not, you will need to go back and conduct the interview again. While the playback is happening, you can jot down any notes in response to what you are hearing, which may help during the transcription process.

3. **Transcribing and Analyzing**

**Materials:** Questions from activity 1, digital or audiotape recordings, immediate written impressions from activity 2, paper and pen, different-colored highlighters, whiteboard or other large writing surface.

**Time (minimum):** Forty-five minutes for transcribing; forty-five minutes for group analysis.

a. After recording your immediate impressions, begin the task of transcribing your interview. Start by playing back the first interview and seeing how much you can remember to write down. Working

in pairs can make a first-time experience with transcribing less harrowing—one partner can dictate while the other one writes.

b. As you listen to each sentence, it is very important to record each and every word, pause, speech quality, and so forth as you hear it on the tape.
c. After the transcripts are complete, have a debriefing on the process by sharing everyone's immediate impressions from the second activity, along with reactions to transcribing. This will provide a chance to share questions and concerns, allowing the research instructor to provide active mentoring in a large-group setting.
d. At this point, if there is not much time remaining, everyone should word process their handwritten notes and bring them to the next class meeting. Otherwise, using handwritten notes will work if there is ample remaining class time.
e. Each partner should do a quick silent read through to orient him- or herself to the flow of the transcript. Circle any themes or codes that are noticed, adding notes in the margin if necessary, related to the agreed-upon topic from activity 1. Both partners should consult together and compare their list of codes, narrowing them down to four or five for simplicity and to avoid redundancy.
f. Using the different-colored highlighters, both partners should go over each of their transcript sets, using a different color for each theme noticed. Switch transcripts and review each other's codes.
g. After all pairs have finished coding their transcripts, the instructor can have each group share their list of codes out loud, providing one example quote that expresses each code. The instructor will write down the codes on the whiteboard (or post them to an online discussion board) as each pair shares them, paraphrasing the supporting quotes.
h. If all goes well, there should be duplicate codes emerging across the various groups. As the example quotes build up, students should be able to notice the various ways that conversation can reveal different themes, as well as support different themes, which has implications for writing up interview research reports.
i. As a group, try your hand at writing up the data using one theme and sample quotes. Brainstorm together how to introduce the quote, tie it to the identified theme, and integrate it into a paragraph. The challenge is to utilize the quote but without it appearing choppy, out of place, or simply supported by the introduction sentence. To assist in this activity, the instructor could share some examples of how other researchers have supported themes from interview data with quotes.
j. Conclude the activity by connecting the themes to (1) the original theoretical frame that your group chose, i.e., feminism, critical

theory, disability studies, or queer theory, and (2) the research questions. Reflect on this question: What would you look for in future transcripts now that you have the analysis information from these initial interviews?

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# Chapter 3

# Participant Observation

*Gail A. Zieman*

## Introduction

Teachers are "naturals" at the art of observation since "deliberate data collection is the extended eyes, ears and soul of the teacher" (Phillips & Carr, 2010, p. 72). Participant observation is a methodology derived from ethnography fieldwork that includes direct observation as a primary method for "discovering the hidden side of classroom life, where every day practices become so ordinary and so routine, they become invisible" (Pine, 2009, p. 209). Participant observation often involves prolonged engagement in a setting. As such, observation allows teachers to become ethnographers within their classrooms (Angrosino, 2007) who can engage in "the in-depth study of naturally occurring behavior within a culture or entire social group" (Ary, Jacobs, & Sorenson, 2010, p. 459).

A teacher-researcher engaging in observation can be likened to a documentary photographer who carefully considers various aspects of the environment, such as lighting, setting, the lives of subjects, and a vantage point for observation that will determine how the participants are framed in a "picture of the life world of those being observed" (Stringer, p. 75, 2007. Continuing with the photography analogy, think of observation as a research method for creating a "photo album" with many snapshots from multiple observations.

Considering that "student behavior is data . . . [and] it occurs all the time right in front of you" (Sagor, 1992, p. 80), observation can assist teachers in being more aware and exploring questions relative to the particulars of their contexts. While large-scale assessment methods

seek to quantify student and teacher progress, observation methods can qualitatively assess what is occurring on the "local" level. Observations can yield valuable and timely data that can be used to make more immediate pedagogical changes and improvements. Many educators, particularly early childhood specialists, use observation as a primary method to assess the progress of young learners (Clay, 2002); however, observation is an effective research method for teacher-researchers in any discipline or context.

The essential purpose of observation is to watch human behaviors and actions and derive meaning from these experiences. Lincoln and Denzin (2003) remind us that observation as an ethnographic methodology consists of "moments and that each is constructed by historical, cultural, economic and political thought or paradigm" (p. 4). As such, the observer should be aware that each "moment" of observation is complicated by many factors and by relationships between the participants, observer(s), and the environment. While observation overall captures and documents a particular phenomenon in time, the complexities and nuances must be carefully considered when drawing conclusions. A major caution for observers is to be aware of the complexities and to be careful of making "one truth" or definitive statements from observation, such as "My students always love that method" or "I knew this curriculum would not be understood."

Observation can then be considered a deeply personal and professional way of seeing that "takes you inside the setting…[to] discover complexity in social settings by being there" (Rossman & Rallis, 1998, p. 136). Observation that is designed and conducted by teachers is a quintessential way to study the complexities that exist within a classroom or school. Mills (2000) writes,

> The practical action research perspective assumes that as decision makers, teacher researchers will choose their own areas of focus, determine their data collection techniques, analyze and interpret data, and develop action plans based on their findings. (p. 9)

Action research that embodies observation is a practical and promising invitation to perceive and understand pedagogical practice with a particular focus and with an action plan that is particular to findings. Teachers, as inherent observers, continually notice and "scan" their classrooms. Consider the kinds of questions that a teacher often asks: Who is ready? What analogy can I give for this idea? Who is not understanding? What is interfering with understanding? How am I getting my message across? Who needs help? Such questions

exemplify the kinds of questions that can guide a teacher-researcher in action research using the observation method.

## Beginning the Process

The early childhood educator Maria Montessori acknowledged that "we cannot create observers by saying observer, but by giving them the power and the means for this observation and these means are procured through education of the senses." To become acute observers, teachers must not only activate their senses, but they should understand practical and ethical considerations in observing.

There are several practical and ethical considerations for a teacher-researcher who is considering using observation as a method. These include (1) selecting a research stance, (2) meeting with stakeholders, and (3) protecting the integrity of the study.

**Selecting a research stance.** With respect to observation, a research stance defines the degree to which a researcher participates in the observation. Choosing a stance for observation provides a necessary focus and is decided prior to the beginning of the observation. The three main stances for observation are: (1) the *active participant observer* stance, (2) the *privileged active observer*, and (3) the *passive observer stance*.

While each stance is described singularly to make clear distinctions, the roles or stances of an observer may change throughout the research process. For example, an observer may begin as an active participant but may change to a passive participant in another phase of the research. Or an observer may adopt an active participant stance in his or her own classroom but be a passive participant in a colleague's classroom. Each stance offers a different perspective for the researcher and a different perspective of participants. It is important to understand that no matter what stance a researcher chooses, "it is not humanly possible to take in everything that you experience" (Mills, 2000, p. 50). By thoughtfully choosing a stance, a teacher-researcher frames the observation accordingly.

The active participant observer stance occurs when a teacher-researcher is actively engaged with his or her students. Since "teachers by virtue of teaching are active participant observers of their teaching practice" (Mills, 2000, p. 50), it is likely that a teacher-researcher in his or her own classroom will assume this role. The teacher-researcher who assumes this stance juggles two roles simultaneously: teacher and observer. As such, this stance requires the researcher to "stay sufficiently detached to observe and analyze" (Merriam, 1988, p. 94) while

remaining focused. As an active participant, the teacher-researcher may want to rely on electronic recording devices (audio and video) to capture the interactions and body language of participants.

The privileged active observer stance occurs when the teacher-researcher is visible to the participants but functions more like a "teacher's aide—moving in and out of the role of teacher, aide and observer" (Mills, 2000, p. 51). Teacher-researchers adopting this stance do not take on a leadership role in the class or setting. For example, a researcher may observe participants in a physical education class or at recess. The researcher is not the primary educator in this context and tries to be as unobtrusive as possible. Yet the observer may likely know students from the school or community. As such, it would be nearly impossible for a researcher to not interact in some way with students in this context. Privileged active observations are typical within special education contexts where the observation of students occurs by an outside observer. Another example may be a university researcher who observes an art class from the back of the room, walks about the room observing students at work, and interacts with some students but does not assume any teaching role in the classroom.

One challenge in assuming the privileged active observer stance is that while the role allows the researcher to blend in, participants may want to interact with the observer, and it may be difficult for them not to do so. In selecting this stance, it is wise to have a detailed conversation with the lead teacher regarding the objectives of the observation, to clarify the roles and expectations, and to reassure stakeholders about the aims of the observation.

The passive observer stance occurs when the observer wishes to remain unidentified, unnamed, and detached. This stance is also known as "noninterventionist," where "researchers do not seek to manipulate the situation or objects, [and] they do not pose questions for subjects" (Adler & Adler, 1994, p. 378, as cited in Cohen et al., 2007, p. 397). A teacher-researcher operating in this stance "no longer assumes the role of a teacher [and is only] focused on data collection" (Mills, 2000, p. 51). It allows the researcher to simply watch and record any and all behavior. The teacher-researcher must be highly organized and aware to be able to rapidly and constantly engage in note taking, as the objective is to record *all* facets of the experience (visual, sound, speech, and tactile).

Choosing a research stance is an important first step in the research process, for it determines how a teacher-researcher is going to observe and what will be the focus of those observations. Therefore, much

thought and consideration should occur before choosing a stance and in determining if the observation is to be structured or unstructured. For example, "structured observation is very systematic . . . [and] enables the researcher to generate numerical data from the observations" (Cohen et al., 2007, p. 398). These observations usually contain multiple variables and subjects, and they require "clear and unambiguous measures" (p. 400). Unstructured observations on the other hand allow the researcher to observe without preconceived or predetermined beliefs.

The following criteria (adapted from Stringer, 2007, p. 76) may guide the decision-making process for selecting an observation stance, taking into consideration the questions of what will be observed and where the observations will take place:

- Places to view behaviors: classrooms, homes, and community contexts like playgrounds and other locations and layouts
- People to view: individuals, types of people, groups, and roles
- Objects to consider: buildings, furniture, equipment, and materials
- Acts that may yield interesting information: what participants are doing
- Activities to imagine viewing: single or group; for example, a field trip, guest speaker, or the like
- Events that can occur: unit of study, semester-long study, parent night, etc.
- Purposes to consider: to understand what is occurring, learned, etc.
- Time considerations: times, frequencies, and sequencing of events
- Feelings to consider: emotions, responses to events, and what people are expressing

A determination about stance should also reflect the research questions and objectives guiding the study. For example, if the intent is to experiment with a new technique, curriculum, or approach in your own classroom, you may be likely to choose the active participant observer stance. If you are curious about whether your students' behaviors are occurring in other school settings, the passive observer stance would be appropriate. Table 3.1 illustrates three possible observer stances for an observer of English language learners (ELLs).

It is important to remember that each stance is not exclusive. From table 3.1, you can see how a teacher-researcher might begin observations using a passive observer stance to see if the phenomenon is occurring in places other than the classroom. For example, imagine that a teacher does not see her ELL students interacting with the other students in the classroom. An observation at recess may corroborate

**Table 3.1** Three Major Observer Stances

| *Stance* | *Active Participant Observer* | *Privileged Active Observer* | *Passive Observer* |
|---|---|---|---|
| Teaching Situation | As a second grade teacher, you taught your students that one way to decode an unfamiliar word is to look at the first letter of the word and ask what word would make sense that begins with that letter. | As a second grade teacher, you taught your students a character development behavior—helping a classmate when he/she needs it although he/she did not ask for help. | As a second grade teacher, you noticed that there is little social interaction between the English as native speaking students and the English as Language Learners students. You wonder if perhaps you have created a classroom environment that somehow discourages this during independent work time. |
| Observational Role | After instructing all students, including ELL students, you observe ELL students during guided reading and note if they use this strategy. | You observe your students during physical education class to see if the behavior is being practiced among your English as native speaking and ELL students. | You observe the ELL students on the playground at recess to see if they interact socially with any English as native speakers. |

the experiential findings from the classroom. To remedy the lack of social interaction among the students, an intervention could be implemented in the classroom and then observed to measure its efficacy through an active participant observer stance. To further measure the efficacy of the intervention outside of the classroom, an observation in a physical education class could be conducted using a privileged active observer stance. While most observers often choose only one stance throughout a study, interesting data could be yielded from varied stances, depending on the aims of the research questions.

**Meeting with stakeholders.** After careful consideration of your research aims, it is recommended that teacher-researchers meet with stakeholders to have a conversation about the research. Stakeholders may include other teachers, parents, school administrators, university

personnel, and other involved participants. Meeting with stakeholders can be a formal or informal process, depending on whether you are employed within the school district or are coming from the outside (e.g., from a university). One purpose of the meetings(s) should be to gain necessary clearances and permissions from school administrators to conduct the research. Meeting with stakeholders can also be a process that allows for clarification of the aims of the research and that provides opportunities for stakeholders to offer input, gain a sense of ownership, and be reassured of the benefits of the study.

**Protecting the integrity of the study.** Some of the important ways to protect the integrity of an observation study are to obtain permission for your study and acknowledge researcher bias. Before any serious investment of time and resources is undertaken, you need to secure school/site administration permission. If you will be observing colleagues in their classes, it is also necessary to gain their permission as well. Permission will need to be acquired from all potential subjects in the study (i.e., students). If the subjects are minors, permission will be required from their legal guardians.

Permission to photograph subjects or sites should not be considered carte blanche. The first place to begin is with the administrator of your building or site so that you comply with the district or site policy. While most school districts have a policy in place regarding the use of photography, you may need additional permission to photograph teachers or students.

Conducting observational research requires an ethical responsibility to observe what you disclose to stakeholders; deviating from approved research aims and goals could have legal and financial consequences for a researcher. While unanticipated events may arise and may be challenging for researchers, it is the researcher's responsibility to disclose such unexpected events and outcomes.

It is also important to recognize that observation is not a neutral data collection activity and that it is natural to have formed opinions about participants in a study. To understand bias in observation, the following considerations are important: understanding the selective attention of the observer—that we look through our own lens of experience; reactivity—that participants may react to being observed and change their behavior for the observer; attention deficit—that the observer may be distracted and miss something important; selective data entry—that a researcher may record an interpretation of an event rather than a description of the actual event; selective memory—that details may be overlooked and not recorded;

interpersonal matters—that a researcher might be drawn to certain individuals and record more about them; expectancy effects—that knowing the hypotheses may influence the observations; the number of observers—that multiple observers may be observing or interpreting tools differently; and inference—that the intentions of participants may not be obvious through observations (Cohen et al., 2007, p. 411). Acknowledging researcher bias in the data collection and analysis phases is important for protecting the integrity of the research.

## Data Collection Process

Observation is a complex and multifaceted process, as it "draws the researcher into the phenomenological complexity of participants' worlds; here [where] situations unfold, and connections, causes and correlations can be observed as they occur over time" (Cohen et al., 2007, p. 397). As such, the researcher will surely observe nuances and surprises that were never intended. While this aspect of observation can be unsettling, it is normal and natural for a researcher to go into an observation looking for one thing but discovering quite another, and unintended "Aha!" moments may often occur.

As discussed earlier, a stance should be selected early on because it influences the selection of observation tools and strategies for data collection. For example, highly structured observation has "observation categories worked out in advance"; semistructured observations "have an agenda of issues but will gather data to illuminate these issues" (Cohen et al., 2007, p. 397). On the other hand, unstructured observations will rely on the researcher going into a situation to "observe what is taking place before deciding on the significance of the research" (p. 397).

It is also recommended that a researcher have a tentative but detailed timeline for data collection that addresses how and when the observations will occur. Making a phased timeline and sharing it with stakeholders is suggested (Mills, 2000, p. 40). The following is an example of a tentative timeline for an action research plan that utilizes observation as one data collection method:

- Phase 1 (August–October). Identify area of focus, review related literature, and develop research questions. Get permissions from stakeholders and institutional review board (IRB). Meet with stakeholders.
- Phase 2 (November–December). Collect initial data. Analyze videotapes of lessons. Interview children. Administer first problem-solving probe.

- Phase 3 (January–May). Modify curriculum and instruction as necessary. Continue ongoing data collection. Schedule team meetings to discuss early analysis of data.
- Phase 4 (May–June). Review statewide assessment test data and complete analysis of all data. Write and distribute the final report. Develop presentation for faculty. Schedule team meeting to discuss and plan of action based on the findings of the study. Assign tasks to be completed prior to year two of the study.

## Data Collection Tools

The following tools and strategies may be used in observation for data collection: (1) note taking, (2) observational forms and checklists, and (3) journals. These will be discussed to provide some practical guidance and examples from practice. It should be emphasized that some stances may utilize specific strategies. For example, an active observer would tend to take notes by using a predesigned observational form, while a passive observer would be more likely to take notes by jotting. However, it should also be emphasized that researchers may use multiple methods and tools to satisfy research questions.

**Note taking: jottings.** A primary data collection strategy in observation is note taking. This sounds easy enough, but if you remember sitting in a college-level lecture class as a freshman and wondering what to write, maybe you decided to write it all and then hardly ever looked up to notice the nonverbal cues of the professor. What likely resulted were pages and pages of notes with a wide range of data ranging from significant to insignificant, as well as missing data. Learning how to take careful and comprehensive notes in observation is essential. The combination of action research, time restraints, teaching responsibilities, and unexpected human behaviors often demands that a researcher be extremely efficient. Creating jottings is an efficient way for action researchers to capture what is observed.

Think of jottings as a method of shorthand that relies on key words, phrases, and uniquely created icons or symbols, such as the male or female sign, a smiley face, or an exclamation point for loud behavior. When making jottings, the researcher often writes quickly, recording as much as he or she can about the behaviors and people being observed without exercising judgment about persons or events. In this respect, jottings are similar to the notes of a court reporter who quickly records what is said while not passing judgment as to who is guilty or innocent. This style of writing may require some practice.

Jottings or quickly written abbreviated notes (words, symbols, and numbers) can later be expanded to more fully developed notes.

A good place to begin is to think of the senses as observation receptors: sight, sound, touch, and smell. Using a notepad and a designated column for each, take three minutes and record *all* that you sense in a classroom, or in the space that you occupy now. Ask yourself, what do I see? What do I hear? What do I smell? What do I feel? Without editing or judgment, record your experiences in jottings (including words and symbols).

It is important not to trivialize what may at first seem unimportant. Using jottings is a form of "free writing" and a way to get ideas down quickly. Aim to write more than less; the more information you have, the better. Once jottings have been recorded, it is advised to expand them as quickly as possible, for example, within the next few hours—if for no other reason than to discern the meaning of your own writing! One week is too long. One day is better, but one hour is even better.

A session for expanding these jottings can best be described as a fill-in-the-blank period when you can go back to elaborate. Correcting grammar or punctuation is not the goal in expanding jottings. Rather, completing any gaps that will help you to gain deeper meaning and a more complete picture from what you observed is the goal. Consider the jotting example from an initial observation of playground activity in figure 3.1:

*Date: 10/1/2010*
*Time: 9:45 a.m.*
*Place: Recess*

*Six boys were playing tetherball. Five girls were at the railing visiting in a circle. They were talking and using animated gestures, mostly hand gestures. B. F. was alone at the stairs on the other side of the railing. K. K. was alone in the baseball field, walking the bases. The weather was crisp, colder for October but sunny. A commotion broke out at the tetherball court. Voices were raised. Body language was of conflict. Suddenly a plane flew rather low overhead. The boys at tetherball looked up and watched it fly over. The fight seemed to stop, and play resumed. The girls didn't notice the plane but seemed to be swatting bees away. They were shrieking and scattering near B. F. but did not interact with her. She watched them and looked up but did not interact either.*

**Observational forms and checklists.** In addition to using jottings and note-taking strategies, teacher-researchers can use observational forms and checklists for recording observational data in action

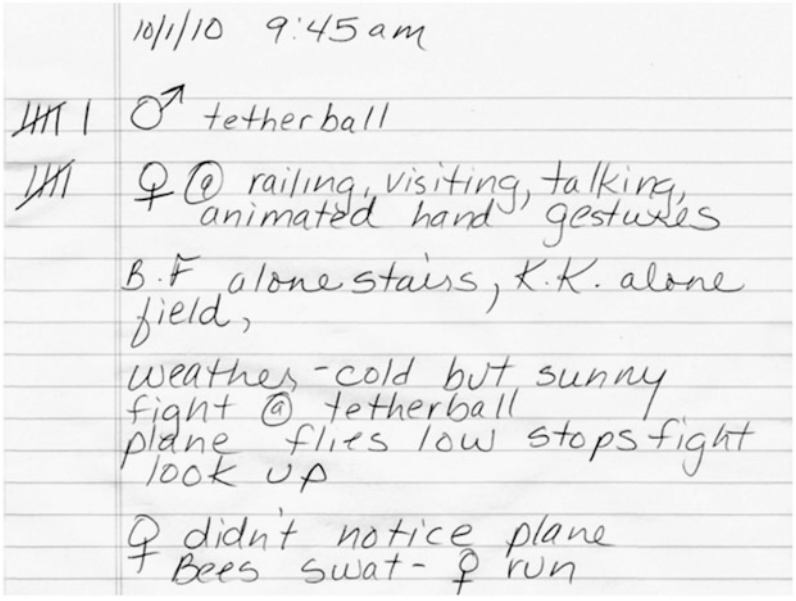


**Figure 3.1** Observation jotting, author created, used with permission of author. Illustrates the process of using jotting during an observation to note activities, participants' behaviors, and a description of the space in a general way. These jottings provide enough information for further elaboration. The following example illustrates how the jottings were expanded through additions of detail that were "filled in" from memory shortly after the jottings were noted. Keep in mind that this example does not reflect a polished version but is an elaboration on the original jottings.

research. There are some important considerations in creating an observational form. Most simply, an observation form should include spaces to record the following: date of observations, class/students observed, and length of observations, with a blank space for notes. Forms work particularly well when the researcher acts as a participant observer, and they are a useful way to keep a systematic record of observations. Multiple observations can be recorded using multiple forms used with multiple researchers.

Since teachers often find themselves in the active participant stance, a well-devised checklist can maximize observation while minimalizing interruptions during teaching. There are three kinds of checklists: (1) one that contains predetermined behaviors based on knowledge of students and prior observations and experiences with students, (2) one that contains theory-based behaviors that are common and have been researched over time, and (3) one that is a combination

of the first two. Cohen et al. (2007, p. 400) recommends creating a checklist that can yield the kind of data a researcher is seeking.

***Predetermined behaviors checklists.*** One way to make observation time more efficient is by using a predetermined checklist of behaviors. Teaching expertise and familiarity with the context and participants can guide the development of these checklists. For example, you may observe students at recess to determine the level at which ELL students interact socially after social skill building interventions during regular in-school class time. You might notice after multiple observations that some common behaviors occur at recess. As a result, you might create a checklist using these behaviors. Using such a checklist relies on prior observation and experience and is a viable and reliable method for establishing categories. For example, an accomplished, veteran first grade teacher would know that there are common methods students use to decode an unknown word. Thus, if you were observing students, these common methods would be included on an observation form. Both direct experience and/or preliminary observations will shape the categories of observable behaviors.

***Theory-driven checklists.*** Educational theory can also guide the creation of observational forms and checklists. Such checklists may already be in place and established and may be used with permission from the author. For example, if a researcher is to observe how students are making personal and subject-content meanings of science content vocabulary, a preexisting checklist, such as the *Vocabulary Self-Selection Strategy* (VSS) (Haggard, 1986), can guide the formation of checklist criteria.

Another example of a theory-driven checklist is one that is based on Bloom's taxonomy (1956). Using this taxonomy, a checklist could be created that includes the levels and expected behaviors. For example, if a teacher wanted to observe and measure students' problem-solving behaviors during math instruction, a checklist describing the kinds and frequencies of behaviors students engaged in relative to the levels of the taxonomy could be created.

Pilot testing observation forms and checklists in the classroom before "official" data collection begins is highly recommended. Regardless of whether you use a theory-driven or a self-devised checklist based upon previous observations and experiences, it is important to practice using the form and to allow for necessary revisions.

**Using journals.** Data collection strategies for observation can also include journals (Burnaford, Fischer, & Hobson, 2001; Sagor, 2000).

If you are an intuitive, reflective observer and like writing, journaling during and after observations can be a natural and appropriate process. Lincoln and Guba (1985, p. 327) suggest three categories for reflective journal entries: (1) daily schedule and practical matters, (2) general reflections and speculations, and (3) notes about the methodology. It is advised that teacher-researchers who use this method purchase a special notebook—maybe a brightly colored one so it can serve as a visual reminder to record observations as they occur. Another format for a journal may be a simple clipboard that is kept close by during observation. Like the jotting process, journaling may require practice. Digital recording devices may also serve to log insights and observed behaviors as they are occurring.

**Using rating scales.** Rating scales are scoring instruments that can denote and measure specific observed behaviors on a continuum. A teacher-researcher is "asked to make some judgment about the events being observed, and to enter responses on to a scale" (Cohen et al., 2007, p. 402). Rating scales provide a range of responses to a given question or statement. A range of responses might include "not at all" to "a very great deal," "agree" to "disagree," "frequently" to "seldom," or "excellent" to "poor." For example, using a five-point scale, with 1 signifying "not at all" and 5 signifying "always," an observer could efficiently rate observed student or teacher behaviors.

Sagor (2000) acknowledges the challenges in creating rating scales:

> Developing a rating scale is a time-consuming process. It takes time because if it is to be a truly helpful assessment tool, it must be written in unambiguous language. It must clearly differentiate between performances that receive different scores, and it must control for extraneous or intervening variables. (p. 91)

Like other observation tools, rating scales should be piloted before an "official" observation.

**Visual data.** Observers can look to visual data as another important source of information for understanding human behavior and interactions. Visual data may be collected or created during an observation. Some examples of visual data include children's drawings, diagrams of playgrounds and classrooms, or photographs of students and research sites. For example, the body language of students during cooperative learning could be examined by looking at videos or photographs of students at work. Additionally, visual diagrams of a

classroom or playground setting can provide important data about the behavior patterns of children at play.

## Data Analysis: Factors, Strategies, and Considerations

Observations enable a teacher-researcher to gather data from various settings. As such, data may be verbal, written, nonverbal, or visual. Given the varying nature of data collected during observation, both qualitative and quantitative methods of data analysis may be relevant. The ultimate goal of any research is to make sense of the findings. Think of data analysis as a "way of seeing and then seeing again . . . a process of bringing order, structure and meaning to the data, to discover what is underneath the surface" (Hubbard & Power, 2003, p. 88).

In terms of analyzing field notes, digital recordings, logs, journals, jottings, and visual data, a qualitative method of coding can be utilized. Once the data have been collected, conceive of "organizing these materials into 'chunks' [categories] to bring meaning to those chunks [interpretation]" (Rossman & Rallis, 1998, p. 197).

An effective way to begin thematic analysis of written data is through *color coding*. Color coding allows for the visual organization of data and for seeing categories and subcategories very clearly. This can be achieved by using colored markers to highlight words and phrases in expanded jottings, journals, or interview transcripts. Categories may be initially formed based upon frequency and later analyzed for overlaps and new categories.

Checklists may yield more quantitative data, such as a calculation of frequencies of behaviors. This data may best be reported using descriptive statistics, such as percentages. Descriptive statistics can also be combined with other qualitative data using mixed methods of data analysis. It is important to take into consideration all data collected, such as visual, audio, written, and other, and to look across all data categories for emerging patterns. It is also important to look to see if there are inconsistencies that have emerged from the data and that may reveal a "critical incident" or may "typify or illuminate very starkly a particular feature of a teacher's [or student's] behavior (Cohen, Manion, & Morrison, 2007, p. 404). Visual data can be analyzed for both frequencies of images as well as themes that can be cross-categorically analyzed with other observation data sources.

After observational data are collected, the researcher can meet and debrief with participants about what he or she has observed about them and provide them with an opportunity to verify or add to the portrayal; this is known as *member checking*. While this may be a bit more challenging with children than adults, it is an option that can greatly increase the credibility of observation, as well as the findings.

## Reporting the Findings

In keeping with action research principles, the final report should include an action plan based on observations. Some other important contents of a report should include the research/inquiry questions, methods used to observe and record data, and a summary of the observations using narrative or statistical data. Reporting other factors, such as delays, withdrawal of subjects, or the inability to collect certain data should also be reported.

Reporting also fulfills another purpose for "going public":

> Going public is an essential part of the action research process for three reasons. First, the process of going public is the process of articulating the actual learning that has happened, bringing together in one coherent whole both the journey and the destination. Second, sharing energizes professional educators—we love exchanging and brainstorming ideas, learning from each other as we read and experience (though vicariously) each other's travels. Third, sharing is celebration—there is great joy and satisfaction in sharing meaningful discoveries. (Phillips & Carr, 2010, p. 148)

## Conclusion

The observation of students and teachers in their natural settings is a natural method for examining teaching and learning contexts for the purposes of improvement, change, and transformation. Deciding on a topic and research questions will dictate a research stance or role. Selecting a researcher stance is a vital consideration before observing. Once a timetable for observation has been conceived, stakeholders have been informed, and permissions are granted, the data collection process can begin. Typical data collection methods used in observation include note taking or jottings, expanded note taking, observation forms, checklists, rating scales, journals, making photographs, videotapes, and diagrams. Observation may also be combined with the method of

interviewing. Findings from the observation of students and classrooms can yield important findings that have relevance for other teachers and stakeholders and for taking action and altering practices.

## Key Terms

**Active participant stance:** An observation role in which the teacher-researcher participates with the participants. Example: facilitating student learning as they work independently in small groups. To envision this stance, think "*in* the field."

**Checklist:** An observation form that has detailed, specific criteria that an observer should look for and acknowledge when observing. The frequency of observations is typically noted with a tally mark.

**Expanded field notes:** Jottings that are "filled in" from memory of an observation. They include details and nuances of the observation, and they are written in complete sentences.

**Jottings:** Quick, abbreviated shorthand notes that may include a combination of words, symbols, and phrases. They are created during an observation to record behaviors.

**Observation forms:** Preconstructed forms for observation of behavior. They may include forms based upon a teacher's experiences and expertise, a researched theory that details specific criteria, or a hybrid form that includes theory- and experience-driven criteria.

**Privileged participant stance:** An observation role in which a researcher observes participants in context without taking a lead role in that context. Example: observing your students as they perform a concert. To envision this stance, think "*on the sidelines of* the field."

**Passive participant stance:** An observation role in which a researcher observes as unobtrusively as possible. Example: studying other students at other schools. To envision this stance, think "*above* the field."

**Rating scale:** A rubric designed to assess specific, observable, and desired traits. It requires the observer to place a quantitative value on observed behaviors.

## Activities

The following scenarios of studies provide examples of different researcher stances and methods for recording observations. After reviewing the questions

and scenarios, proceed to the guiding questions to reflect on observation as a data collection method.

1. How could a researcher record observations of high school teachers' and students' perceptions of the use of a teaching tool (e.g., a SMART Board interactive whiteboard for mathematics instruction)?

Scenario: Mark, a high school math teacher, hoped to gain an understanding of teacher and student perceptions of SMART Board use for instruction in high school. He knew that they were designed to appeal to visual and kinesthetic learners as well as to provide more real-world applications for the curriculum. His high school purchased and installed several interactive whiteboards throughout its classrooms to increase student achievement, especially in mathematics. Mark was curious as to how these boards were used during instruction. His study involved the high school's math team of eleven teachers and one hundred of their students. The eleven teachers were surveyed and observed using the boards during instruction. Five teachers were chosen for follow-up interviews. One hundred students were surveyed after being observed participating in SMART Board lessons. Five students were chosen for follow-up interviews based on their survey responses. Throughout the data analysis, several common themes were identified: (1) utilization, (2) interactivity, (3) training, (4) preference, and (5) gender. Each affected student learning and the SMART Board's efficacy. Mark's study resulted in recommendations on how to improve instruction and student learning by maximizing the potential of the SMART Boards and its users at his school.

   a. What was Mark's stance?
   b. What kinds of methods did Mark use to collect data from students using SMART Boards? From teachers?
   c. Do you think Mark used forms and checklists? What criteria do you think he included with each group?
   d. What methods would you use if you were Mark?
   e. What do you see as some of the challenges of observing in this study?

2. What methods can be used to observe a colleague teaching?

Scenario: Mr. Diamond has been invited to observe a colleague's classroom. Mr. Smith would like him to come in before the official observation to acquaint himself with the class. Mr. Diamond arrives to Mr. Smith's class, and he sits in the back. He draws a map of the classroom and jots down some notes. He returns the next day to observe. Mr. Diamond notices that

Mr. Smith has a video camera set up to record the class. Mr. Smith provides Mr. Diamond with a rating scale to use during the observation. Mr. Diamond conducts the observation and completes the rating scale while jotting down notes. Afterward, Mr. Diamond writes a reflective journal entry and observes the video, which provides mostly close-up shots of Mr. Smith teaching. Later in the day, he discusses the observation with Mr. Smith. Mr. Diamond focuses on students' behaviors observed that were not addressed on the rating scale, his feelings about the classroom climate, and the aesthetics of the classroom.

a. What was Mr. Diamond's stance as an observer?
b. What kind of data did Mr. Diamond collect?
c. How could Mr. Diamond proceed with data analysis?
d. What are the strengths and limitations of the methods used for observation?
e. What other methods can be used to observe a colleague's classroom?

3. What are some methods for observing learning strategies with first graders?

Scenario: Based on the work of Patricia Cunningham's *Working with Words* reading curriculum, Ms. Tracy observed a group of first graders. A test group was chosen for their average first grade literacy performance, and they focused on hands-on strategies for learning words. Ms. Tracy used a theory-driven observation form that she had designed. Through her literature review, she learned that there are common behaviors that students exhibit when given the task of using phonemic awareness skills, or matching letter sounds and symbols. She chose three of these behaviors and devised an observation form that would record the frequency of these behaviors. Observations were conducted as students engaged in word construction. Four students were observed at one time for a duration of fifteen minutes. Ms. Tracy devised a form for each group and noted the frequencies of her students' behaviors relative to preestablished categories.

a. What is Ms. Tracy's stance for observation?
b. What kind of methods did Ms. Tracy use to observe and record observations? Why?
c. What other methods might Ms. Tracy use to observe her students' learning?

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# Chapter 4

# A Case for Case Study Research in Education

*Kit Grauer*

## Introduction

This chapter makes the case that case study research is making a comeback in educational research because it allows researchers a broad range of methodological tools to suit the needs of answering questions of "how" and "why" within a particular real-world context. As Stake (1995) suggests, case study is often a preferred method of research because case studies may be epistemologically in harmony with the reader's experience and thus to that person a natural basis for generalization.

In recent years, case study research has become more popular as a methodology in education research (Creswell, 2002; Merriam, 1998; VanWynsberghe & Khan, 2007; Yin, 2003). This could be due to a number of factors, from the increased interest in all forms of qualitative research to the proliferation of case studies used in education classes. As the pedagogical use of case studies, popularized by the Harvard business and medical schools, has become more prevalent across a number of education disciplines (e.g., Henderson, 2001; Klein, 2003), educational researchers are more aware of the viability and complexity of case studies. Case studies, as they are used for pedagogical purposes, take their inspiration from case study research. They tell the story of a particular educational event in context so that novice teachers can understand the complexities of analysis and the possible search for solutions. As a research method, case studies also analyze a particular set of issues within the educational context and could easily be used in

narrative form to serve as the basis of a pedagogical tool. Although the finished case study is an increasingly useful teaching strategy in education and is a fascinating area of research in its own right, this chapter will concentrate on the use of case studies as a research methodology.

Case study as research is most appropriate when the type of research question is "how" or "why" and the phenomenon to be studied is in a real-life context. Case study research excels at bringing us to an understanding of a complex issue or subject and can extend experience or add strength to what is already known through previous research. In contrast, case studies can also emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. Researchers have used the case study research methodology for many years across a variety of disciplines. Social scientists, in particular, have made wide use of this qualitative research methodology to examine contemporary real-life situations and provide the basis for the application of ideas and the extension of methods.

Researcher Robert K. Yin defines the case study research methodology as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomena and context are not clearly evident, and in which multiple sources of evidence are used (Yin, 2003, p. 23). Thus, case study methodology uses in-depth examination of single or multiple case studies, which provides a systematic way of approaching an educational problem, collecting and analyzing the data, and reporting the results. Equally important to case study research methodology is triangulation through a variety of data sources. The use of multiple data sources is a strategy that also enhances data credibility (Stake, 1995; Yin, 2003). Potential data sources may include, but are not limited to, documentation, archival records, interviews, images as photographs or video, physical artifacts, direct observations, and participant observation. Unique in comparison to other qualitative approaches, within case study research, investigators can collect and integrate quantitative survey data, which facilitates reaching a holistic understanding of the phenomenon being studied. In case study methodology, data from these multiple sources are then converged in the analysis process rather than being handled individually. Each data source is one piece of the "puzzle," with each piece contributing to the researcher's understanding of the whole phenomenon. This convergence adds strength to the findings as the various strands of data are braided together to promote a greater understanding of the case.

Many well-known case study researchers such as Robert E. Stake and Robert K. Yin have written about case study research and

suggested techniques for organizing and conducting the research successfully. Both Stake (1995) and Yin (2003) base their approach to case study on a constructivist paradigm. Constructivists claim that truth is relative and that it is dependent on one's perspective. Constructivism is built upon the premise of a social construction of reality. One of the advantages of this approach is the close collaboration between the researcher and the participant, while enabling participants to tell their stories through the researcher's mining of the data. Through these stories, participants are able to describe their views of reality, and this enables the researcher to better understand participants' actions (Lather, 1992). VanWynsberghe and Khan (2007) suggest that case studies are relevant regardless of the research paradigm used, such as postpositivism, critical theory, feminist, or constructivist. They suggest that the past three decades of case study research have produced more than twenty-five definitions of case study methodology, each with its own particular emphasis and direction for research. This is both the strength and the difficulty of case study research, as each individual case and the questions around it suggest their own particular set of methods, analysis, and reporting.

So, when should a researcher use a case study approach? According to Yin (2003), a case study design should be considered when (1) the focus of the study is to answer "how" and "why" questions, (2) you cannot manipulate the behavior of those involved in the study, (3) you want to cover contextual conditions because you believe they are relevant to the phenomenon under study, or (4) the boundaries are not clear between the phenomenon and the context.

## Ethical and Practical Considerations

As with any qualitative methodology that uses human subjects, case study research must be conscientiously thought through to avoid any potential conflicts of interest or harm from misunderstanding the process or publication of the research. Most universities require researchers to complete an institutional behavioral and ethical review or IRB review prior to undertaking this type of research. This includes informed consent of the participants and consent of the various agencies (such as schools or museums) where the research might take place. Exemplary case studies establish clear protocols and procedures in advance of investigator fieldwork. Often researchers conduct a pilot study in advance of moving into the field in order to remove obvious barriers and problems.

The basic concepts of the case study, terminology, processes, and methods should be clear to all involved. Gathering of data using multiple techniques strengthens the case study by providing opportunities for triangulation during the analysis phase of the study. Protocols for the case study research, including time deadlines, formats for narrative reporting and field notes, guidelines for collection of documents, and guidelines for field procedures to be used, should also be shared. Investigators need to be good listeners who can hear exactly the words being used by those interviewed, even if the conversations are audiotaped. Researchers need to know how to ask good questions and interpret answers as well as how to review documents looking for facts, how to read between the lines, and how to pursue collaborative evidence elsewhere when that seems appropriate.

Real-life situations require flexibility and the ability to not feel threatened by unexpected change, missed appointments, or problems with technology. Researchers also should be aware that they are going into the world of real human beings who may be unsure of what the case study will bring. As such, this requires on the part of researchers an ability to be open to the particulars of the environment and their participants in terms of political and ethical issues. Especially when working in schools, it is important to think of yourself as a guest in that environment and not expect that your agenda for interviews or observations should have precedence over the busy lives of the professionals involved. Two of my own research studies (Grauer, 1998; Grauer et al., 2001) provide different types of examples as to the attendant protocols for researchers. In the first case, the bounded system was the preservice teachers taking art education courses at a large university education program. From a large survey to form a baseline of beliefs about art education, a purposeful sample of those student teachers were chosen to be interviewed and followed into their practicum placements to observe how their beliefs matched their practice. Beginning teachers had to be assured that their names would be changed, that they could withdraw from the study at any time, and that their participation or lack of participation would not influence marks or evaluations from the university. As well, they were assured that they would be given any interview transcriptions for member checks prior to the data analysis. It was important for me as the researcher to establish relationships with the student teachers, their placement schools, and their sponsor teachers and not to add stress to an already stressful practicum. Lessons observed were at the preservice teachers' discretion. Often I had to rearrange observations due

to unexpected events at the school or student teachers' requests at the last moment. In all instances, I was very conscious of the possibility of power and coercion and did my best to mitigate any form of either instance. In being respectful of participants' feelings and their time, I was able to develop and nurture open and insightful dialogues.

In "Images for Understanding" (Grauer et al., 2002), the method of data collection was digital photographs and video as well as interviews and observations, so that artists, teachers, and children (and their parents) had to be clear about what they were signing in the consent forms. In this case, I established a quid pro quo with the school staff that all my images would be left with the school to use in parent newsletters, parent-teacher nights, and open houses. It was essential that we cull any pictures that included images of children where there was no parental release signed. All of the previous issues, including developing trust, being sensitive to timing, and not inconveniencing participants, were also a major component of successful interactions with participants.

## Data Collection

For the researcher designing and implementing a case study project, there are several basic key elements to the study design that can be integrated to enhance overall study quality or trustworthiness. Researchers using this method will want to make sure that enough detail is provided so that readers can assess the validity or credibility of the work. As a basic foundation for achieving this, researchers have a responsibility to ensure that the case study research question is clearly written and that the case study design is appropriate for the research question. Case study research generally answers one or more questions that begin with "how" or "why." The questions are targeted to a limited number of events or conditions and their interrelationships. To assist in targeting and formulating the questions, researchers conduct a literature review. This review establishes what research has been previously conducted and leads to refined, insightful questions about the problem. Careful definition of the questions at the start pinpoints where to look for evidence and helps determine the methods of analysis to be used in the study. The literature review, the definition of the purpose of the case study, and an early determination of the potential audience for the final report guide how the study will be designed, conducted, and publicly reported.

Case study research design principles lend themselves to including numerous strategies that promote data credibility or "truth value." Researchers should also plan for opportunities to have either a prolonged or intense exposure to the phenomenon under study within its context so that rapport with participants can be established and so that multiple perspectives can be collected and understood, as well as to reduce the potential for social desirability responses in interviews. This can be challenging in the busy world of schools, but multiple observations, interviews, and the like will give far better data for purposes of analysis and provide a greater context for understanding the case.

## Data Analyses

A key strength of the case study method involves using multiple sources and techniques in the data gathering process. The researcher determines in advance what evidence to gather and what analysis techniques to use with the data to answer the research questions. Data gathered is normally largely qualitative, but it may also be quantitative. Tools and methods to collect data can include surveys, interviews, documentation review, observation, participant observation, image-based methods, and even the collection of physical artifacts.

Throughout the evaluation and analysis process, the researcher remains open to new opportunities and insights. The case study method, with its use of multiple data collection procedures and analysis techniques, provides researchers with opportunities to triangulate data in order to strengthen the research findings and conclusions.

One of the potential difficulties of the case study as a research methodology is the large amount of data that can be available for analysis. Many different systems for identifying themes and issues can be developed, from computer-assisted analysis to the use of sticky notes. Analysis should show that the researcher relied on all the relevant evidence, that all major rival interpretations were dealt with, that the most significant issues of the study were addressed, and that prior expert knowledge was brought to the study from the literature review.

The tactics used in analysis force researchers to move beyond initial impressions to improve the likelihood of accurate and reliable findings. Exemplary case studies will deliberately sort the data in many different ways to expose or create new insights and will deliberately

look for conflicting data to disconfirm the analysis. Researchers categorize, tabulate, and recombine data to address the initial propositions or purpose of the study, and they conduct cross-checks of facts and discrepancies in accounts. Focused, short, repeat interviews may be necessary to gather additional data to verify key observations or check a fact.

As data are collected and analyzed, researchers may also wish to integrate a process of member checking, where the researchers' interpretations of the data are shared with the participants, and the participants have the opportunity to discuss and clarify the interpretations and contribute new or additional perspectives on the issue under study. At the analysis stage, the consistency of the findings or "dependability" of the data can be promoted by having multiple researchers independently code a set of data and then meet together to come to consensus on the emerging codes and categories.

The best case studies report the data in a way that transforms a complex issue into one that can be understood, allowing the reader to question and examine the study and reach an understanding independent of the researcher. The goal of the written report is to portray a complex problem in a way that conveys a vicarious experience to the reader. Case studies present data in very publicly accessible ways and may lead the reader to apply the experience in his or her own real-life situation. Researchers pay particular attention to displaying sufficient evidence to gain the reader's confidence that all avenues have been explored, clearly communicating the boundaries of the case and giving special attention to conflicting propositions.

## Reporting and Disseminating

As case study methodology is particular to the case under study, so too are the various possibilities for reporting and disseminating the research. Reporting a case study can be difficult for any researcher due to the complex nature of most cases and the issue of bringing complex phenomena into a format that is easily understood by the reader. The goal of any reporting process, whether it includes standard articles, research reports, or image-based articles, is to write the case keeping the audience in mind so that they feel that they have been an active participant in the research and can determine whether the study findings would be applicable to their own situation. There is no one correct way to write a case study report, just as there is no specific

set of data collection methods or analysis tools that fits all case studies. Case study reports can vary in length from a few pages to a full dissertation depending on the audience and the extent to which the researcher wants to make clear the methodological tools, data analysis, and complexities of the case. Case studies often contain a substantial element of narrative. Good narratives typically approach the complexities and contradictions of real life. Accordingly, such narratives may be difficult or impossible to summarize in neat scientific formulas, general propositions, or theories. To write a particularly "thick" and hard-to-summarize narrative is not a problem. Rather, it is often a sign that the study has uncovered a particularly rich problematic issue. Some possibilities for writing case studies include telling the narrative of the case study in chronological order or by examining the research questions and relating those to the existing literature.

Yin (2003) suggests six methods for reporting a case study: linear, comparative, chronological, theory building, suspense, and unsequenced. The *linear-analytic method* is the standard research report structure (problem, related work, methods, analysis, conclusions); in the *comparative method,* the same case is repeated twice or more to compare alternative descriptions, explanations, or points of view; the *chronological method* is a structure most suitable for longitudinal studies but still acceptable when a period of time is at issue; *theory building* presents the case according to some theory-building logic in order to constitute a chain of evidence for a theory; the *suspense method* reverses the linear-analytic structure and reports conclusions first and then backs them up with evidence; and the *unsequenced method* involves none of the above, for example when reporting the general characteristics of a set of cases. Most of these methods depend on the skills and inclinations of the researcher in building a strong case.

In the experience of my graduate students and myself, an interweaving of theory, linear, or chronological methods can produce the best of all worlds in building your case. Images can be used for analysis and photo-elicitation with participants, but also as augmentation to the final report. Images bring to life the context and character of the issue. The most important job of the researcher is to find a reporting method that both illuminates the case and makes a strong connection to the intended audience. This is by no means a simple task. It also encourages, however, the researcher to really examine the whole research process, from the first proposition to the final reporting, and bringing consistency and coherence to the situation at hand.

## Limitations to Case Study Methodology

The limitations of case study research are the same as for any research methodology. Case study research is only worth pursuing if it is a good fit with the problem or issue to be addressed. Case study methodology is not more rigorous or less rigorous per se. It becomes rigorous or less rigorous depending on the type of knowledge we want to generate in order to solve specific problems. This is true for all the research methods. The parameters addressed in the previous sections of this chapter are a good start to answering the question of whether this methodology is worth the effort for you.

## Conclusion

The case study methodology involves multiple sources of data, may include multiple cases studies, and may produce large amounts of data for analysis. Researchers use the case study method to build upon theory, to produce new theory, to dispute or challenge theory, to explain a situation, to provide a basis to apply solutions to situations, to explore, or to describe a phenomenon. The advantages of the case study method are its applicability to real-life, contemporary, human situations in education and in making those findings publically accessible through written reports, websites, case narratives, or image-based publications. Finally, the results of case study methods relate directly to the common reader's or practitioner's everyday experience and can facilitate an understanding of complex real-life situations in educational contexts.

## Key Terms

**Case study research:** An empirical inquiry that investigates a contemporary phenomenon within its real-life context, in which the boundaries between phenomena and context are not clearly evident, in which the questions are of the "how" or "why" variety, or in which multiple sources of evidence are used. A case is the unit of analysis—the phenomena occurring in a bounded context. To research the case, case study methodology uses a variety of methods such as participant observation, interviews, and the like, determined by the particulars of the case and the research questions.

**Data:** The collection of information from a variety of different methods and sources. Data can be collected from surveys, interviews, documents, observations, images, participant observation, and even the collection of physical artifacts.

**Triangulation:** In case study analysis, the term "triangulation" is often used to indicate that more than two methods to collect data are used in a study, with a view to using multiple avenues for checking results.

## Activities

1. Think of a real problem in your context where case study methodology would be appropriate.
    a. What is the nature of the problem?
    b. Why would case study methodology be appropriate?
    c. Can the questions to be answered be framed around "what" and "how" questions in a real-world context?

2. How could you design the case study with an emphasis on the ethical considerations for your participants?
    a. How will you recruit participants?
    b. How will you ensure informed consent without coercion?
    c. What type of protocols or procedures might you establish?

3. Who might the audience for your case study be, and what type of reporting system would be the most appropriate for that audience?
    a. How do the methods and data analysis support the type of reporting you provide?
    b. Why are some types of reporting more appropriate for different audiences?
    c. Can you use a variety of reporting systems with the same case?

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# Chapter 5

# Visual Research, Visual Data

*Sheri R. Klein and Faith Agostinone-Wilson*

## Introduction

When thinking about what constitutes "data" in research, interview transcripts, observational checklists, or field notes are often the first to come to mind. However, those in social science and educational fields still manage to overlook the rich potential of visual data sources. Prejudice against visual data in education research may be due to persisting stereotypes and misconceptions about it, for example, that it lacks rigor (Lynn & Lea, 2005), or that it simply implies a chart or graph. Even within qualitative research, oftentimes visual data is included under the rubric of "documents," along with text-based data (Denzin & Lincoln, 2000; Patton, 2003), and is not recognized for its unique qualities.

Recent texts on arts-based qualitative research (Cahnmann-Taylor & Siegesmund, 2008; Knowles & Cole, 2008) have contributed to helping researchers understand what constitutes visual data and its relevance for educational research, including action research. However, there is in general a lack of references concerning "methods of interpreting visual materials, and even fewer explanations of how to do those methods" (Rose, 2007, xiv). If visual research methods are to be encouraged within educational research, it is apparent that teacher-researchers could benefit from understanding what constitutes visual data, its relevance in action research, and what methods of analysis may be appropriate for visual data collected within educational settings.

*Visual data* is the outcome of visual research, or the "production, organization and interpretation of imagery" (Prosser, 2007, p. 13).

*Visual research* as a methodology has its roots in visual ethnography, visual sociology, and visual anthropology (Collier & Collier, 1986), where photography, film, and video have been used as methods to understand culture, with "the idea that valid scientific insight in society can be acquired by observing, analyzing and theorizing its visual manifestations: behavior of people and material products of culture" (Margolis & Pauwel, 2011, p. 1). However, visual research is also grounded in the artistic practices of artists and designers who use drawing, sketching, model making, and mapmaking, for example, to inquire about practice. In the context of educational research, visual research methods are used primarily by qualitative researchers who are interested in "knowing" and understanding through multiple ways, including the visual. In the case of action research, teacher-researchers are likely to use visual research in combination with other methods, such as interviewing and observation, to collect multiple sources of data.

Visual data can be loosely defined as two- or three-dimensional materials, images, objects, or virtual/computerized representations that are found, elicited, generated, or collected within the context of a research setting for the purpose of better understanding the phenomenon under study, for example, classroom life. Visual data may also be understood as "the visual input or output in the study of a society or culture" (Margolis & Pauwels, 2011, p. 4) and may include pictorial social media or online postings, images, signs, art, decorations, and objects located in a community or in educational, familial, or environmental settings (e.g., schools, homes, playgrounds); diagrams, maps, charts, and graphs created by a researcher; photographs of participants and classrooms; two- or three-dimensional or multimedia artworks created by participants or researchers; videos of teaching; and even a researcher's random scribbles or doodles! It can also include secondary visual data sources that have been produced by other researchers (Pauwels, 2011), such as charts, images, diagrams, and the like.

To better understand the role and function of visual research methods, we can look to fields of *visual communication*, *visual studies*, *visual culture*, *cultural studies*, *media studies*, and *material culture*. Educational researchers, particularly in the social sciences, have long utilized the principles of visual communication in the visualization of quantitative data in the form of "scientific graphics" (Tufte, 1997). Visual studies as a "confluence of art history, cultural studies and literary theory" (Elkins, 2003, p. 5) is concerned with "the study of visual practices across all boundaries [and disciplines]" (p. 7). "Visual

culture" is a term that refers to anything visual, from art to

> fine arts, tribal arts, advertising, popular film and video, folk art, television and other performance, housing and apparel design, computer game and toy design and other forms of visual production and communication . . . malls, amusement parks, local sculpture gardens[—and schools]. (Freedman, 2003, p. 1)

The visual culture of schools includes artifacts (images and objects) found in the everyday life of schools and in students' lives (e.g., clothing, accessories, and personal objects). Cultural studies is a field devoted to the study and critique of cultural norms, beliefs, values, and the meanings of objects and events within a cultural group (Schwandt, 2001). Material culture studies is an interdisciplinary field (anthropology, architecture, art, cartography, folk studies, and art history) that is devoted to the collection, examination, and interpretation of artifacts (handmade, mass produced, historical, and vernacular), or "things" produced or found within a culture. Material culture also considers places, such as cultural sites (historical buildings, landmarks, museums, libraries, classrooms, schools, and shopping malls), relevant for study. Current trends in material culture emphasize the examination of artifacts as they interface with participants in their cultural setting (Blandy & Bolin, 2011). Finally, media studies is another interdisciplinary field that focuses on the study of photography, film, and television, as well as print and electronic communication, including electronic media and online communication.

Action researchers can look to the lived worlds of their classrooms, schools, and communities and within online and virtual teaching and learning environments as places to observe, locate, and examine the "things" and "stuff" that are present within these environments. Furthermore, we can look to arts-based research (Sullivan, 2008); arts-based educational research (ABER) (Cahnmann-Taylor & Siegesmund, 2008); and a/r/tography (Irwin & Springgay, 2008) as methodologies that utilize systematic artistic inquiry and processes to explore pedagogical questions through the creation of visual data such as artworks, photo-essays, and performance.

## Purposes for and Relevance of Visual Data

The collection and production of visual data in action research has relevance for teachers, teacher educators, and particularly arts educators who routinely address the production and analysis of visual texts and the "vast traffic of visuality, material culture tropes, and

media messages that mark our era" (Rolling, 2008, p. 11). In addition, science educators also rely on visual data to understand and explain scientific concepts and observations of phenomena through the creation of charts, graphs, maps, or eye tracking (Olk & Kappas, 2011). Classroom teachers, early childhood educators, social workers, school psychologists, and participatory action researchers may also find visual research methods useful for inquiry into the lived worlds of young children and adolescents.

Using visual research methods, photographers and geographers collaborated to explore the lived experiences and social conditions of young children, the elderly, and the institutionalized in regions around the world, resulting in participant- and researcher-generated photographs (International Visual Methods Conference, 2011). The significance of this kind of visual data is that it contributes to the expression of agency and empowerment for the participants and brings awareness to issues impacting specific regions and populations. In this sense, visual research methods can serve the aims of emancipatory action research in raising consciousness, addressing inequities, and promoting change.

The significance of visual data for action research is that it allows for "uncovering the previously unknown or unconsidered dimensions of social life" (Banks, 2007, p. 121). For example, interviewing participants may reveal what they think about a topic; however, in examining photos or drawings by participants, a researcher may see contradictory data or better understand the emotional responses of participants. Watching a video of one's teaching may offer new insights into practice from observing gestures and tone of voice. Additional reasons for creating and eliciting visual data in research are that images engage us, evoke stories and questions, enhance empathic understanding, and encourage reflexivity in research (Weber, 2008). More importantly, the creation of participant visual data lends their "voice" to a study. Overall, visual data offers another way to examine phenomena through methods that pay attention to nuances and clues not affordable through other research data. Finally, visual data can also contribute to theory building and to "significant discoveries" (Kingsley, 2009, p. 543) that might not be possible through text-based data.

## Data Collection Categories and Examples

Visual data collection can be understood as a deliberate and systematic process that may be either a *snapshot* (one time event), a *time*

*series* (visual data collected over a short period of time, or *longitudinal* (visual data collected over an extended period of time) (Pauwels, 2011). Typical of action research studies, visual data collection likely may be a snapshot (onetime event) or a time series collected over a short period of time.

Two major categories of visual data include *preexisting* or *created* data. Both categories of data may be collected as part of action research in the context of case study research, participant observation, program evaluation, portfolio/artifact evaluation, arts-based educational research, or participatory action/social justice research. Preexisting visual data includes images or artifacts that are already present as part of a specifically targeted research setting. An artifact may describe any three-dimensional object or "thing" that is created by an individual or group in a research setting. This approach is apparent in Joseph and Burnaford's (1994) *Images of Schoolteachers in Twentieth Century America*, where the authors examine artifacts from popular culture such as music, movies, television, and children's books for common portrayals of educators.

Further distinctions within visual data include images or artifacts that are produced by the researcher as a form of documentation, or by the participants as a way to capture meaning within their own constructs. For example, Francaviglia's (2000) visual categorization of historic preservation sites as either "passively preserved," "actively preserved," "restored," "assembled," or "imagineered" utilized his own photographs as part of his exploration of how iconography is reflected in heritage landscapes. So in a sense his research dealt with two layers of visual data: the historic sites themselves and his documentation of those sites via the photographs that serve as both image and artifact.

Participants can also undergo an exercise designed by the researcher that results in the production of visual data that is then analyzed. Orellana (1999) conducted a three-year ethnographic case study in which elementary school children were provided with cameras to take photographs of their urban environments while doing common activities such as walking in the neighborhood. This turned out to be a beneficial method for more accurately capturing the participants' point of view, through a process known as "photo-elicitation" (Banks, 2007; Lapenta, 2011; Rose, 2007). Orellana explained,

> In framing these shots, the children looked at the community in ways that I never considered. In the pictures that I took, and in my movement through the area, I looked straight ahead, and rarely up; I also never considered climbing up to get a different view of things. (p. 78)

Something as simple as the visual difference between apartment dwellers who often have to look up to see their homes and house dwellers who do not helped inform Orellana's interpretations and conclusions about the meanings of childhood for those growing up in immigrant communities.

Luttrell's (2003) research also used participant-produced visual data. The site of her study included a high school program for pregnant girls, which was located apart from the rest of the high school. Luttrell presented the girls with different activities where they would create collages or perform role-plays in response to questions about identity and their experiences being a pregnant teenager segregated from the rest of the population of the school. She found that the comments made while the girls created their pictures were more detailed and revealing than when she simply asked a series of questions in a traditional interview format. The use of hands-on activities as part of capturing interview or observational data is an important strategy recommended by Christensen and James (2008) when conducting research with children. In another study using participant-produced visual data, young children collected natural objects as they experienced historical sites and then created artworks about their experiences (Trimis & Savva, 2009).

In arts-based research, researchers may also create artworks about their pedagogy to better understand their relationship to their practice. Collage as inquiry is used by arts-based researchers as one way to respond to research questions, and also to elicit discussions (Butler-Kisber, 2008). Another example is "painting as research" and "doing research in painting" (Sullivan, 2008, p. 242) where artistic inquiry serves to critique practice. In the case of a/r/tography, visual data is created in and through "relational moments" (Springgay, Irwin, & Kind, 2008, p. 88) and through "encounters" and "participation" with others (p. 86). The researcher's life in this sense becomes the "data" as well as a source for the creation of "data." Along these lines, physical spaces, such as classrooms, may also be understood as spaces for "relational moments," and where identities are acted out, acted upon, and performed.

Cahnmann-Taylor and Siegesmund (2008) explain, "The visual is not just a tool for recording, analysing or interpreting data, it has become a tool for the production of data. . . . It has become *generative*" (p. 99; author emphasis) in that it helps to generate narratives, poetry, or other data. Banks (2007) suggests that visual data offers "sensory prominence" (p. 4). In this regard, visual research methodology offers opportunities to "accommodate embodiment and the senses" (Pink,

2007, p. 4), to acknowledge experience as multisensory and spaces as multidimensional (O'Toole & Were, 2008)—two concepts addressed in material culture studies.

Bolin and Blandy (2003) define material culture as "all human-mediated sights, sounds, smells, tastes, objects, forms, and expressions" (p. 250). In the collection of visual data, Blandy and Bolin (2011) offer strategies that move from a "primarily object based orientation" to an approach that is "environmentally grounded" (p. 2) and that supports the collection of multisensory data within a setting or place. In this sense, material culture data collection takes into consideration the individual artifacts that are produced or found within a setting, place, or culture; the experiences of researchers and participants with the artifacts; and the use of the space or setting (Blandy & Bolin, 2011; O'Toole & Were, 2008).

Visual data collection can occur in a variety of ways and through methods that can generate images and narratives from researchers and participants. *Photo-voice* is a method that has been used with "research participants to document their own lives" through photography and narrative (Mitchell & Allnutt, 2008, p. 258). Similarly, *video diaries* (Tremlett, 2011), *photo-diaries* (Chaplin, 2011), and *participatory video* (Mitchell & deLange, 2011) allow participants to tell their stories and become empowered using technology. The elicitation of children's images is a method widely used by art educators and early child educators. Questions that may guide photo-elicitation and data collection may include, what should the child be asked to draw? Could the child draw anything of his or her choice? (Ganesh, 2011). Visual methods researchers may also combine photo-elicitation methods with other methods such as interviews.

One question that an action researcher may ask is, how much visual data should I collect? In response to this question, it is recommended that the research questions guide the data collection, but also take into consideration the research timetable, a plan for storing electronic and print visual data, and selecting visual data collection methods that are appropriate to the context and age of participants.

## Considerations for Visual Data Analysis

Meanings and interpretations of visual data are of central importance to visual data analysis and typically draw upon qualitative data

analysis methods, such as sorting, categorizing, coding, and allowing themes to emerge. However, visual data can be analyzed using quantitative, qualitative, or mixed methods of analysis. Banks (2007) distinguishes in general that in "quantitative research, images such as tables, charts, etc. are one way to display the essentially textual or numerical data findings.... In more qualitative research the images are usually the subject of research and some kind of analysis" (p. 38). Charts, graphs, and diagrams may therefore be understood as graphic representations of numerical data, categorical data, or theoretical models.

Some common quantitative and qualitative methods for visual data analysis include content analysis (Bell, 2001); the constant comparison method (Glaser & Strauss, 1967); interpretive methods grounded in critical ethnography, critical theory, or critical feminist theory and intertextual analysis that is common to semiotic analysis (Smith-Shank, 2004, 2011; Van Leeuwen & Jewitt, 2001); material culture data analysis (Blandy & Bolin, 2011; Fleming, 1985; Schlereth, 1985); and arts-based research data analysis. It should also be noted that many studies combine a variety of data analysis methods; however, most approaches for analyzing visual data are interpretive in nature and rely on qualitative judgment and processes for determining categories and themes as well as for identifying relationships in and across data.

When approaching the analysis of visual data, Bell (2001) recommends formulating research questions to guide one's focus; these questions are typically the research questions guiding the study, or they may be new questions that emerge based on the collection of data. For example, let's say a researcher was interested in a question of "how many" and the frequency of, or emphasis on, a certain kind of imagery, or the order in which images appear in a documentary video clip. Through a content analysis, the researcher could log the frequencies of students' nonverbal gestures within the video and translate those frequencies into percentages. In a further review of images, the researcher might also notice a large number of instances where students are not looking at the teacher. The researcher may then go back into other data, such as observation notes or photographs, to compare this finding. Another example might be a researcher who uses content analysis to determine the instances of science symbols found in pre and post preservice science teachers' concept maps. The constant comparison method (Glaser & Strauss, 1967) would allow for the comparison of new data with existing data through comparing,

integrating, and eliminating categories, until no new insights or categories can be produced (Cohen, Manion, & Morrison, 2007). After looking at the concept maps, the researcher might also look to reflection papers or interviews with students to compare categories and themes using the constant comparison method.

A researcher can also be on the lookout for positive or negative representations of individuals in visual data (photographs or textbooks), which approaches the realm of politics. A historical overview concerning the representation of people or events is another possibility for formulating questions to guide analysis of photographic or textbook images. Making such determinations draws upon methods from semiotics as well as from critical ethnography, critical theory, and feminist theory, as well as emancipatory action research, with the aim of a social and historical critique and the opening of spaces for critical dialogue. For example, suppose a researcher has an interest in examining the visual representation of children within historical (nineteenth-century) elementary-level textbooks and other curricula. Following Bell's (2001) lead, a good starting point would be to determine the frequency of such images appearing within texts using content analysis. Additional questions to consider include, how then could those appearances be categorized? In what manner are children shown, active or passive? How are children represented with respect to race, class, and gender? In what environmental contexts are children shown, or not shown? How are teachers depicted? What are the historical shifts that start to happen and how are these manifested in the images? How do these representations reflect larger social, economic, and political conditions and religious and cultural mores? How do the images under study compare to and differ from other images of children or classrooms from the same period? How do the images speak to power and privilege?

Higonnet (1998) takes a similar approach to the representation of children from the 1700s to the present by analyzing engravings and photographs. These images are further tied to social constructions of childhood, which have undergone important changes regarding psychology and sociology, beginning in the eighteenth century. A single image, such as a photograph or advertisement, can be examined for how people and objects are positioned in relation to each other. Van Leeuwen and Jewitt (2001) locate points of depiction that can be used in combination to compose images, either deliberately or unintentionally, as part of cultural semiotics. For example, a camera can be angled to look down on a group, implying the superiority of

the photographer/researcher. Teachers who stand in front of seated students suggest authority. Eye-level depictions indicate more of an egalitarian relationship, as in a photograph of a politician sitting at a table with potential voters trying to communicate populist intent. Likewise, adoring crowds looking up at a celebrity can suggest that the audience is in a worshipful mode. Close-ups convey familiarity and confrontation, whereas wide-angle shots indicate formality. People within photographs can be represented in profile (detachment) or directly at the viewer (engagement). Van Leeuwen and Jewitt (2001) point out that the positioning of participants is used as part of the construction of an overall message and is not merely accidental. Following these guidelines, photographs taken by researchers or participants could be analyzed with considerations toward lighting, angle, and location of subjects within the image. Other questions guiding a semiotic analysis might concern the "signs" in the photographs, such as images, objects, or personal objects held by children and teachers. Contemporary photographs, advertisements, and other media-based images (television and film) can also be analyzed using these methods of analysis.

Photos, jottings, sketches, or diagrams of playgrounds, classrooms, and school spaces can also generate meanings about the function, aesthetics, and emotional dimensions of educational spaces. Van Leeuwen (2008) in *Discourse Practices* analyzed educational spaces through diagrams and representations of classrooms in children's books to explore how social practices are acted out using criteria that include actors, actions, time of day, and resources/objects represented. Similarly, Prosser (2007) used visual research methods (concept maps, photography, making diagrams, and image-elicitation) to study and analyze the visual culture of schools in the UK, focusing on teaching and nonteaching spaces, and used a semiotic analysis to interpret the multiple forms of data. Pearse (1992) advises that educators in the postmodern era need "to be versed in semiotics and methods for decoding sign systems" (p. 250). Semiotic analysis of visual data as part of action research can allow for interpretation and interrogation of visual images as signs, codes, and texts within educational research contexts for their personal, visual, historical, cultural, and social meanings. Semiotics also considers a "researcher's focused self-reflection about her/his background, political agenda, and motivations for curiosity about the project" (Smith-Shank, 2011, p. 14).

Civic and community spaces can also be sites for semiotic analysis (Smith-Shank & Soganci, 2011); this has particular relevance for

secondary-level educators, university educators, and community activist researchers. Three main questions according to Smith-Shank (2011, p. 14) can guide a semiotic analysis: (1) What does a certain sign, code, or text mean? (2) How does it represent what it means? And finally, (3) why does it mean what it means? (Danesi & Perron, 1999, p. 292, as cited in Smith-Shank, 2011, p. 14). Using these guiding questions, teacher-researchers and student-researchers can photograph and document places, spaces, and signs within sites for later analysis.

Material culture studies offers some specific methods for data analysis to action researchers for the interpretation of visual data in keeping with the definition of visual data that it is "any visually perceptible object of interest to, or produced by, human beings" (Grady, 2008, p. 3). While there are numerous models for the analysis of artifacts within material culture studies (Blandy & Bolin, 2011; Fleming, 1985; Schlereth, 1985; Sorin, 1999), most models include a process for describing, classifying, and interpreting an artifact. The following criteria may guide such an analysis: *Identification* of the object/artifact: What is it? Size, color, weight? What is it made out of? Does it have any unique qualities such as markings, signs of aging, handwriting, or the like? *Description* of the design, style, and function of the object/artifact: Does the object/artifact embody a specific artistic or design style? How is it crafted? What purpose does the object/artifact serve (aesthetic, utilitarian, symbolic, historical, etc.) within that culture and within the culture at large (Fleming, 1985, as cited in Blandy & Bolin, 2011, p. 6)? *Interpretation*: What meaning and value does the artifact have as a single artifact and in relation to other similar artifacts and to the culture (Fleming, 1985, as cited in Blandy & Bolin, 2011, p. 6)? Other criteria can also be considered: the producer or creator of the artifact (Blandy & Bolin, 2011; Jones, 1993; Sorin, 1999), the audience and whom the object was intended for, and the history of the object relative to its ownership (Montgomery, 1982, as cited in Blandy & Bolin, 2011, p. 8).

Consider the image of a researcher's desk in figure 5.1. How would you go about analyzing this desk using research methods from material culture? What kinds of research questions might guide the analysis? Certainly, objects could initially be analyzed individually using the suggested criteria and later analyzed holistically as a group of objects. While objects/artifacts might be analyzed as unique artifacts, other researchers (Blandy & Bolin, 2011) suggest a more holistic analysis and interpretation of artifacts that embraces "environmental aesthetics" and considers how people interact with material culture,


**Figure 5.1** A researcher's desk, photograph used with permission of author.

particularly through the five senses. This is illustrated in the example of their university art education students who collected data at a shopping mall through "mapping" the space via the five senses (p. 11). They suggest that data collected at a site that includes classrooms may take the form of notes, interviews, drawings, and photographs or videos that can reveal how participants interact with artifacts and what they are feeling and sensing. Researchers can analyze multiple forms of visual data initially using the categories of the five senses (what was visible, heard, etc.). Data could also be analyzed for emerging themes by looking across data sources to better understand the function, meaning, and value of material culture through the eyes of the participants and the researcher. If there are multiple researchers, or if the research engages participants in the analysis of artifacts through observation and interviews, using methods for interpretation that aim toward consensus of interpretation (Lassiter, 2004, as cited in Blandy & Bolin, 2011, p. 13) is recommended.

Another example of visual research that explores the multisensory experiences of place is the collaborative research between a photographer and a cultural geographer (Caitlin De Silvey and James Ryan)

who used photography and interviews to record the workplaces of those who repair and mend everyday objects, such as cobblers or tailors. Using mixed methods that included visual research, the researchers examined participants' responses, values, and meanings within these spaces (Rose, 2011).

O'Toole and Were (2008) offer similar strategies for the analysis of physical space that focuses on the usage of space by participants in a particular culture or context. In a study of an organizational space, the researchers analyzed office spaces first by collecting multiple forms of data: describing the organization (how many employees, the location, etc.); describing the look, feel, and arrangements of furniture and objects within spaces; creating diagrams and photos to document spaces; and interviewing and observing organizational members on site as they interacted with objects. The analysis allowed for emerging themes that resulted in vignettes and thematic categories, such as "the blocked door," which describes a "symptom of change in power relations within the organization" (p. 625), or "the receptionist's desk," which explores the role of bric-a-brac on the receptionist's desk relative to her organizational status and identity (p. 626). This kind of interpretation supports the analysis of space "in the context of the culture in which it is practiced" (p. 621) and provides a good example of how space can be analyzed using methods from material culture studies and critical ethnography to examine how power and identity are enacted through use of organizational spaces. In the context of classrooms as sites of research, the interaction between participants, artifacts, and space may be analyzed with respect to issues of power, identity, and status using O'Toole and Were's (2008) methods. In addition, methods of photo-elicitation, photo-voice, and participatory video can allow for the creation of visual narratives.

To return to figure 5.1, the analysis of the researcher's desk might also consider other data obtained at the site, or at the researcher's office space. For example, the researcher could be interviewed and observed at work. Through observation, note taking, and even videotaping, a more holistic portrait of the researcher could emerge in relation to the researcher's objects or artifacts.

The analysis of visual data with respect to created artworks in the context of arts-based research can consider the following criteria and guiding questions for interpretation of data: *Intentionality*: What did the researcher intend? *Researcher presence*: Where is the researcher in this research? *Aesthetic qualities*: How does the work look? What emotive qualities does it embody? Is the work *coherent*, *authentic*,

and *evocative*? And does the work have transformative potential (Knowles & Cole, 2008, p. 67)? In reference to a/r/tography, Irwin and Springgay (2008) explain that "the reflexive stance to analysis will be on-going and may include aspects from traditional ethnographic forms of inquiry, such as constantly comparing themes that emerge from the data" (p. 117). In the case of arts-based research, more emphasis may be given to the analysis of the product, or artwork, whereas in ABER and a/r/tography, the emphasis of analysis is on both process *and* product as well as the relationships between the two (R. Irwin, personal communication, November 12, 2011). However, it should be emphasized that qualitative research methodologies in general focus on "intertextuality" and "a kind of play between texts" (Finley, 2007, p. 686) that supports cross-data analysis using multiple forms of data. A good example of intertextual data analysis occurred in a study in an elementary classroom over a six-month period, where a researcher utilized case study, narrative, and visual ethnography methods to gain knowledge of literacy instruction (Kingsley, 2009). Audio- and videotapes of the classroom and teacher were analyzed, along with photographs of the class. Photographs were numbered and sorted, and photos and video images were compared. In addition, videotapes were dated, cataloged, transcribed, and cross-referenced with photos.

## Presenting Visual Data

Traditionally, visual data in educational studies takes the form of graphs, charts, or singular photos that support the text. Depending on the nature of the study and the methodologies used, images may take a more prominent role in dissemination; this is particularly true in the case of qualitative action research, participatory action research, arts-based research, ABER, and a/r/tography. In some cases, the medium for dissemination may be highly visual and public, as in a performance, exhibition, video, film, or the creation of a website. In another example, the culmination of research might take the form of a photo-essay that is presented as a visual arrangement in a "visually organized sequence" with captions (Ricardo & Roldan, 2010, p. 15). Some nonlinear approaches to presenting visual research include websites, using *Prezi* presentation tool, using *Autodesk Sketchbook Pro* (for Mac), or using Web 2.0 tools.

When using images for presentation, consider issues of copyright and obtain permission from participants and any holders of

copyright for an image under consideration. It is also important to consider technical issues and make sure images for presentations are clear, are of high quality (72 dpi for websites and 300 dpi for publications), and are captioned with title, date, media, and any other relevant information that is appropriate to the presentation or publication. Aesthetic issues are also important when presenting visual data. In addition to adhering to publication guidelines, for example, the APA guidelines (2010), or other stylistic guidelines, think about the placement, font, size, and color schemes of charts and graphs. Looking to the work of Tufte (1997) may guide researchers in visualizing quantitative data.

## Practical and Ethical Considerations

Practically speaking, using photography and videography to collect data requires access to cameras and basic skills. In addition, eliciting photos and works from participants may require some preparation with participants, as skills may vary among them. Experimenting with cameras or any equipment prior to data collection may be beneficial for both researchers and participants. In general, researchers using film, video, or still photography as a visual research method should consider the following questions: What do I intend this to be a picture of? Why am I taking it now? What am I excluding from this frame? (Banks, 2007, p. 74). These kinds of questions could also be addressed with participants.

It is also important to obtain consent for the use of visual data that participants produce as part of classroom activities for research purposes, especially if you intend to present or publish study results. Teachers who are conducting action research in their own classrooms should also obtain this permission. This is often a matter of creating a simple one-page form that clearly states the purpose(s) for which the artifacts will be used, assurance of anonymity for the subject or the artifact maker, the voluntary nature of participation by donating the artifacts for research use, and that participants will be able to withdraw their work at any time without penalty. It is also critical to emphasize that class grades will not depend upon participation in the study. A space for the date, signatures of participant and researcher, and researcher contact information should also be provided.

## Conclusion

Visual research methodology supports the creation and utilization of visual data as a critical way for knowing and understanding educational practice. Visual data includes any two-dimensional or three-dimensional image or artifact found, created, or elicited within a research setting. Visual research methods are commonly used in qualitative research that includes arts-based research, ABER, or a/r/tography. Visual data may be created through drawing, painting performance, sculpture, photography, video, film, or the creation of charts, graphs, and other graphic representations. Visual data analysis within the qualitative research paradigm does not position visual data as an "add-on" to research, but as integral to understanding a phenomenon, meanings, and relationships within and across data and between the researcher, participants, context, and practice. For action researchers, visual data collection and analysis provides opportunities for greater reflexivity within research, for the examination of visual and material culture within schools and communities, and for connecting with participants in a mutually rewarding way. For emancipatory action researchers, it provides opportunities for advocacy and the opening of critical dialogue between participants, communities, and larger communities of practice.

## Key Terms

**Intertextuality:** Refers to the meanings and linkages between and across texts (visual, written, spoken, etc.).

**Material culture:** Artifacts (handmade, mass produced, historical, and/or vernacular) or "things" produced by or found in a culture.

**Multisensorality:** The sounds, tastes, textures, smells, and sensations that may be found within a research setting or experienced by the researcher or participants.

**Photo-elicitation:** A data-gathering technique involving the use of film, video, or photography (digital or analog) along with interviewing and observation. It is used often in early childhood, art education, historical, and oral history research.

**Photo-voice:** A data-gathering method that combines photography and documentary video with activist research goals. Both researcher and participants collect visual images as part of social activism.

**Social semiotics:** Involves how people intentionally or unintentionally use symbols and signs to convey meaning within groups. It is multimodal, including advertising, social media, fine arts, photography, architecture, fashion, and video. Signs or symbols can be directly displayed or represented by how people and objects are positioned.

**Visual data:** Two- or three-dimensional materials, objects, or virtual/computerized representations found, elicited, produced, or collected within the context of a research setting for the purpose of better understanding the phenomena under study.

**Visual research methods:** A method used by a participant or researcher that produces a visual in the context of a research setting for the purposes of analysis and understanding the phenomena under study.

## Activities

1. **Historical Analysis of Visual Images** (can be done in small groups or whole group)

    a. As a class, select a concept that can be visually traced over a period of time, such as presentation of math, art, or science curricula (1920s to today); the portrayal of people with disabilities in children's books; or illustrations in "how-to" texts. For the activity to be salient, the chosen concept should involve artifacts that are easily locatable for analysis and be of interest to the group.
    b. Locate the artifacts. This can be done with physical artifacts like older textbooks, or artifacts can be accessed online. Also consider utilizing the library's archives if a specialized historical interest is part of the project. Some topics may require many more artifacts than others in order to obtain topic-related imagery.
    c. Arrive at five to seven focus questions, dependent upon the concept and images chosen. These can be related to criteria that may include representational frequency, emphasis/deemphasis, positioning of people and objects, and photographic or compositional point of view.
    d. The class can divide into small groups and use some or all of the focus questions to examine the artifacts. Some groups can analyze the data by using quantitative methods (content analysis), while other groups may use qualitative methods, noting themes and categories. Other groups may employ mixed methods of analysis.
    e. After small groups have completed their analysis, findings should be shared and compared with the whole class. Review the class findings

according to the focus questions. What themes have emerged across the groups? Analyze and code themes until all categories have been exhausted. What conclusions can be drawn?

f. As a class, decide how to best present the data. A common approach is to deal with the numerically tallied answers first, such as frequency, followed by an introduction of major themes. Will there be charts, graphs, and so forth? Representative visuals of the artifacts can also be included to illustrate each theme. Will images be included? If so, which images? Think about formats for representation of the findings. What considerations might be necessary if findings were to be posted on a website versus distributed within an internal institutional report?

2. **A Visual Sociological Analysis of a Daily Commute**

Recommended: See Danesi and Perron (1999) and Smith-Shank (2004) for examples of semiotic analysis of visual imagery.

a. Using a digital or smartphone camera, take six photos of your commute to work or school and six photos of your commute home, for a total of twelve photos. It is important that the photos be representative of an "average" or common commuting experience. Photos can be of street signs, landmarks, stores, architecture, or other everyday features en route. Be sure to stop your car before taking photographs!
b. Either print out the photos or arrange them in an easily visible manner by copying and pasting then in Word or PowerPoint. Arrange the photos chronologically from the start of the commute to the end point and categorize them as "From Home to Work/School" and "From Work/School to Home." Do not label the images in any way—let the photos speak for themselves.
c. Using semiotic analysis, examine each photo to look for signs, codes, and texts within the images, making note of each.
d. Use the following questions (Smith-Shank, 2011) to guide this individual semiotic analysis:
   What does a certain sign, code, or text mean?
   How does it represent what it means?
   Why does it seem to mean what it means?
e. After completing a semiotic analysis, discuss and compare your semiotic analysis with classmates. What differences or similarities do you find regarding the interpretations of landmarks, neighborhoods, and signs? Are there patterns among the semiotic analyses? For example, do you see differences in the photographs depending on whether the commute was conducted on foot, in a car, or on public transportation? Are there any connections between the kinds of items in the photographs and issues of race, gender, social class,

labor, ability status, and the like? For example, do you see links between the occupation of the commuter and the type of neighborhood in which she or he lives? Would the nature of the commute be the same if the commuter had a physical impairment? How does the environment contribute to facilitating or impeding mobility in society?

f. As a class, list any major conclusions you can draw based on the semiotic analyses of everyone's documented commutes.

3. **Classroom Material Culture** (whole group or two groups)

a. Those who are currently teaching in K–12 classrooms should each bring in two to three physical but portable objects from that space. Some suggested objects include supplies, posters, student work, manipulatives, textbooks, or personal desk items such as photographs and bric-a-brac. Those who are not teaching in K–12 classrooms can bring in everyday or personal items from their own homes to make for a parallel analysis with two groups (one for K–12 and one for home artifacts).
b. Assemble the artifacts in an area of the room where they can be easily viewed as a class.
c. Use methods of material culture data analysis identified in this chapter and listed below to examine the artifacts (K–12 and home spaces):

Identification of the object/artifact:

What is it? Size, color, weight? What is it made out of?
Does it have any unique qualities such as markings, signs of aging, handwriting, or indications of the maker?

Description of the design, style, and function of the object/artifact:

Does the object/artifact embody a specific artistic or design style?
How is it crafted?
What purpose does the object/artifact serve (aesthetic, utilitarian, symbolic, historical, etc.) within that culture and within the culture at large?

Interpretation: What meaning and value does the artifact have as a single artifact and in relation to other similar artifacts and to the culture?
Audience: Whom is the object intended for?
Ownership: What is the history of the object relative to its ownership?

d. Each group should individually and collectively provide input for each of the artifacts.

e. Are there common cultural threads between different classroom artifacts? Are any differences present? If so, what are they?
f. What are key similarities and differences between the artifacts of school settings and home settings in terms of material culture? From a historical point of view, why would there be similarities?
g. Conclude the activity by photographing the artifacts and assembling them into a report using PowerPoint or another visual archival system.

Note: This activity can be extended with an analysis of how participants within a space interact with artifacts. If you have access to classrooms, interview participants regarding the artifacts within the classroom. Take still photos of classrooms. Analyze each type of data separately for emerging themes. Look across all three data types that include artifact analysis to see what categories and themes are salient.

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# Chapter 6

# Arts-Based Research: Data Are Constructed, Not Found

*Karinna Riddett-Moore and Richard Siegesmund*

## Introduction

"Arts-based research" is a vague term that has gained prominence since the last decade of the twentieth century. Nevertheless, the social sciences have implicitly practiced arts-based methods for well over one hundred years. Arguably, arts-based research theoretically began once social science accepted the camera as a source for producing valid social science data. Eadweard Muybridge's 1878 studies of a galloping horse—used to settle a bet—could be a formal date for the birth of the field (Solnit, 2003). In the mid-twentieth century, anthropologists—often noting poetic forms of discourse in the people they were studying—wrote poems in response to their field experiences and personal lives, but these were not considered to be part of their disciplined work (Cahnmann-Taylor & Siegesmund, 2008). In the last two decades of the twentieth century the barriers in the use of poetry to record and report anthropological findings continued to dissolve (Cahnmann, 2003).

Today, arts-based research has a number of different, and sometimes contradictory, manifestations. Thus, anyone who seeks to claim this methodology for a research study must explicitly state the form of arts-based research used. There are at least three major divisions: arts-based research as studio practice, arts-based research as therapeutic intervention, and arts-based research as social science inquiry. Within these divisions, it is possible to make further subcategories of practice that, again, may be at odds with each other.

In Europe, the PhD in studio practice is widely accepted. Here, advanced work in visual materials has a structure and rigor that exceeds the work completed in the MFA. Graeme Sullivan (2010), James Elkins (2009), as well as Estelle Barrett and Barbara Bolt (2007) provide important conceptual theory in this area. Sullivan (2006) observed that to frame art making as research, it needs "to be more than a private rite of passage of personal discovery" (p. 21). Art has less to do with expressing meaning and more to do with inscribing nonlinguistic thought in physical materials (Dewey, 1934/1989). A PhD in studio practice is a structured analysis of the empirical world through visual media.

Arts-based research as therapeutic practice is grounded in Viktor Lowenfeld's *Creative and Mental Growth* (1947). As Lowenfeld's text dominated art education preservice education for forty years, there is a quasi-therapeutic bent to contemporary art education practice. Traces of this predilection can be found in the *National Visual Arts Standards* that call for students to "grow ever more sophisticated in their need to use the visual arts to reflect their feelings and emotions" (Consortium of National Arts Education Associations, 1994).

However, art therapy is its own discipline. K–12 art specialists are not art therapists. Advocates for the methodology of arts-based research in art therapy include Ron McNiff (1998), who proposes—in contrast to Sullivan—that art serves a critical need of expressing personal feeling and psychological states. Thus, we can see in Sullivan and McNiff two advocates for arts-based research with diametrically opposed objectives.

Yet another form of arts-based research comes from nineteenth-century social science inquiry. The emergence of the popular use of photography and film quickly coupled to the new academic disciplines of anthropology and sociology. At this point of origin, the photographic image seemingly captured truth. However, as our understanding of the manipulation of images became more sophisticated, the subjectivity infused into images within social science practice was more apparent. For example, the photographs of Lewis Hine in the 1920s of child labor in Southern textile mills were highly influential in changing child labor law in the United States (Hine, 1908–1924). Contemporary analyses of Hine's proof sheets demonstrate how Hine consciously framed these compositions to maximize their emotional effect. One of the framing techniques placed the child alone in a long aisle of machines. In the iconic Hines photos, the subject is generally a girl, which enhances our gendered sense of vulnerability and invites the viewer's empathy. The child stands in a middle distance dwarfed by darkly looming machines. There is a sense of technology

overpowering the unprotected female. Popular media across the United States sensationalized Hine's photographs as "true," but his photos were not disinterested snapshots of reality. They were highly subjectively constructed documents to give voice to a specific problem that Hine had identified and sought to address.

## The Role of the Image in Social Science Research

Today, we no longer regard the camera as a neutral object that records reality. Attention has shifted to how we construct images. We now ask how the researcher, before taking the photograph, actively or passively manipulates and stages the scene—often with the collusion of the participants.

Furthermore, arts-based images are no longer the sole provenance of photography, or even the visual arts. Dance creates images. Music renders mental images, as does poetry. All of these can be considered tools within the arts-based research kit (Leavy, 2008). However, for this chapter, we shall continue to focus on the visual arts and the role of the visual image.

## Three Forms of Arts-Based Images

Understanding images—and the role they play in arts-based educational research—is increasingly complex. There are three ways to conceptualize image data in social science research: *objective*, *formative*, and *generative*. These distinctions represent a linear, nonhierarchical spectrum of methodological approaches to imagery in teacher research.

The objective image seeks to frame a slice of the world as it appears, while incorporating the subjectivity of the researcher. As mentioned previously, the works of Lewis Hine and Eadweard Muybridge provide examples. In contemporary art education, Wendy Ewald and Alexandra Lightfoot (2001) continue this tradition of arts-based practice by allowing children to take photographs of their world and then write about their experiences as they understand them.

The formative image uses disruptions—building on twentieth century art practice of *montage* (the repetition or appropriation of film and photographic imagery), *collage* (the disruption and juxtaposition of commercial imagery and text), and *bricolage* (the appropriation and resignifying of everyday objects)—as a space to expand meanings or allow for new combinations of metaphor. We appropriate, rip,

tear, and reconstruct to discover meaning. Contemporary art education practices such as visual journaling allow for formative image making where students (as well as the teacher-researcher) aggressively appropriate and repurpose images. The scholarly research of Koon Hwee Kan (2007) manipulates conventional snapshot photographs of schools in Singapore to generate a deeper aesthetic understanding of goals and purposes of schools. The images produced serve primarily as a record of the process of her understanding. They are not standalone art objects intended for noncontextual formal visual analysis.

The generative image is a performative exploration of the visual, utilizing raw media, in a space that may precede language and formal symbolic conceptualization. The researcher or the research participants viscerally create visual objects or experiences from previously unformed materials—such as clay, chalk, and yarn—in the process of data collection or data analysis. The generative image is more than a record of a place or an event. The generative image, as Dewey (1934/1989) reminds us, distills experience through compression. It conveys, through relationships of qualities, more than semiotic meaning. It has the potential—through the skillful manipulation of visual media—to bring the viewer and the maker into a felt (sensory and emotional) space. The interventionist art practice of yarn bombing offers an example (Moore & Prain, 2009). One can knit with no outward purpose. You can knit without intending to knit something. There is a felt, repetitive somatic process. Powell and Lajevic (2011) describe how engaging students in direct materiality opens opportunities for new forms of perception and relational thinking.

When practiced by researchers with professional training in the arts, the generative image creates works of scholARTistry (Knowles, Promislow, & Cole, 2004). These are works that ask for evaluation by two standards: the standards of social science research and the standards of professional aesthetic practice. How high a level of professional practice is open to debate. Unquestionably, the theatrical performances of Anna Deavere Smith are both exemplars of professional drama and at the same time are first-rate social science (Smith, 2011). These are works that move seamlessly between two realms. However, not all works of arts-based research achieve the level of a tour de force. Tom Barone suggests that it may be acceptable for works to excel as either art or social science and be "good enough" in the other (Cahnmann-Taylor & Siegesmund, 2008). What "good enough" means—especially if educational researchers who serve on graduate committees expect the highest rigor to be in social science, but will be

lenient on the aesthetic dimension—is contentious. How the art made in the service of arts-based research functions outside of social science, and within its own artistic discipline, is an important consideration.

These three different approaches to the image in arts-based research—the objective, the formative, and the generative—have implications for creating, documenting, and analyzing data. The methods are both broadly democratic and, at the same time, deeply specialized (i.e., exclusionary) depending on the visual skills the researcher brings to bear. The three forms are not exclusive of each other. One work of research could include examples of all three. Regardless of how one embraces the image, data are constructed, not found.

## Methodologies of Arts-Based Educational Research within Social Science Practice

Arguably, the first fully articulated methodology of arts-based educational research (ABER) is Elliot Eisner's *educational connoisseurship* (1991). Just as a good critic reeducates perception (Dewey, 1934/1989), the educational connoisseur helps us to see fine-grained elements of excellent practice that would have gone unnoticed by the novice or inattentive viewer.

In a somewhat similar vein, Sara Lawrence-Lightfoot and Jessica Hoffman Davis (1997) argued for a methodology of *portraiture* in qualitative research. This methodology breaks with a hard "objective" science stance that research must "tell it as it is." Instead, Lawrence-Lightfoot and Davis argue that the task of the portraitist is to find the goodness in the subject. Only by this deeply empathetic approach will people open themselves to listening. Thus, through speaking to goodness, the researcher has an opportunity to speak to places for improvement—with a greater possibility that she or he will be heard.

Narrative research is concerned with how people create meaning within the stories they tell. In the arts-based methodology of *narrative storytelling*, the lines between fact and fiction melt away. There is no clear break between a world as it is, and a world imagined. Tom Barone's *Touching Eternity* (2001) remains a compelling exemplar of this method.

*A/r/tography* is a methodology that was developed at and continues to be explored by the faculty and students of the University of British Columbia (Springgay, Irwin, Leggo, & Gouzouasis, 2008). The name suggests that knowledge of education comes from a mapping (*graphy*)

conducted by the artist, researcher, and teacher. All three roles must be in the research design for the work to be a/r/tography. A/r/tography maintains that we come to know in complex ways, and these three roles (artist, researcher, and teacher) create pathways through which knowledge is adumbrated, overlaid, enriched, and triangulated. As Sullivan (2006) suggests, to conduct research requires enveloping a problem. A/r/tography is a strategy of surrounding. All three roles are necessary to complete this encircling. Two out of three is not good enough.

For the rest of this chapter, we will focus on arts-based educational research, as our research concern is on the lifeworlds (Husserl, 1936/1970) of teachers, students, and classrooms. There is a growing body of published ABER studies that provide examples of the methodology (Bresler, 2006; Cahnmann-Taylor & Siegesmund, 2008; Hafeli, 2008; Hickman, 2007; O'Donoghue, 2009; Riddett-Moore, 2009; Rolling, 2010; Sameshima, 2007; Springgay et al., 2008; White, 2011). It should be acknowledged that not all arts-based research focuses on teaching, curriculum, and problems of school. While ABER focuses on these issues, it is possible to have arts-based research that is not concerned with education.

## Ethical Practice

**The problem of fiction.** Social science, and educational research, is concerned with a world as it is. The problem, as Immanuel Kant (1781/1929) pointed out over two hundred years ago, is that only God can know the world as it is. We live in a world of shadows and illusions. Philosophically, all we can objectively know is the furniture of the world. For example, in the night, we trip over an end table. It is dark. We think it is the end table, but we do not know it is the end table. Nevertheless, we tripped over something. We have encountered the furniture of the world. How do we best reckon with all of it?

According to the *Stanford Encyclopedia of Philosophy*, a fact is that "which makes the truth-bearer true" (Mulligan & Correia, 2008). If we turn on the light and discover that what we stumbled over was the end table, the light is a fact that reveals truth. The light is a fact that makes the truth-bearer (that thing we just stumbled against) true. It is an end table.

The word "fiction" comes from the Latin word "*fictio*." It is an act of fashioning. It is forming. Everything we do in this world is an act of forming. Thus, one might claim that all of our science is a fiction; if we pretend otherwise, then we are claiming that we are

God by claiming to know the world as it is. Therefore, Tom Barone (2008) argues that a position of epistemological humility is critical for all arts-based research. At the same time, the fictions that we create surrounding the lives of students, teachers, and classrooms is that which makes the truth-bearer true. Our fictions are in the service of becoming facts. Fictions in arts-based educational research are legitimate to the degree that they help us understand the world as it is in the lives of students, teachers, and stakeholders in education. The fictions of arts-based research provide insight into the furniture of the world.

**The problem of rigor.** Probably every art teacher has felt exasperation when a student responds, "It's pretty, and I like it." Novice practitioners of ABER can fall back on this same justification in order to avoid a close and careful analysis of their work. Arts-based educational research does not remove the teacher-researcher to a protected realm of personal expression where anything goes. Just as there are standards for rigorous criticism of works of art, there are standards for rigorous criticism of arts-based research. The methodologies of educational criticism (Eisner, 1991) and a/r/tography (Springgay et al., 2008) provide examples. However, as Eisner has observed, in the end, a work of art-based educational research has to make a difference in how we see teaching and the lifeworld of classrooms (Cahnmann-Taylor & Siegesmund, 2008).

## Data Collection Factors

In the next two sections on data collection and data analysis, we will include examples from an ABER study. Because the data and analysis will vary depending on the theoretical framework of the researcher, we felt that having an example from classroom practice was helpful in understanding how a study might be formed and informed by arts-based practices. We have found that the best way to begin research design within this methodology is to refer to other examples of arts-based research already in the field.

Proponents of ABER recognize that there are ways of knowing and being known in the world that cannot be expressed by language alone (Cahnmann-Taylor & Siegesmund, 2008; Rolling, 2010; Springgay, Irwin, & Kind, 2005). Data cannot simply speak for themselves. A researcher who uses works of art as data cannot let artwork stand alone without analysis. Nevertheless, analysis can never fully translate the meaning within an artwork. The linguistic and the nonlinguistic

form a harmonic convergence of meaning. As with other forms of data, such as transcripts from interviews, works of art cannot simply be inserted into the research. Objective, formative, and generative images undergo series of careful analyses. The researcher finds patterns, makes summaries, trims excess information, and ultimately presents the data in order to make a case about the research topic. The data is re-formed by the researcher. With ABER, data can be the process of invention and interpretation, rather than interpretation alone (Irwin & Springgay, 2008).

Here theory plays a critical role. For example, Jacques Derrida's theory of deconstruction (Derrida, 1967/1998) offers a specific framework for the gathering, shaping, and sorting of data. Similarly, Michel Foucault's theory of the care of self (Foucault, 1988) offers insight into viewing art as a process of self-reinvention. Jacques Rancière (2010) offers a theoretical framework for art practice as shaping communities to reimagine how we live our lives in relationship to others. Theory is all around us. Theory is embedded in each visual arts studio discipline. For example, the artistic medium of collage is based on the theory that meaning is constructed through ripping preexisting symbolic forms and juxtapositioning these fragments into new metaphors.

Arts-based data is valid when the artist/researcher/teacher creates art with the same theoretical basis as other written forms of data. Theory can take many forms; however, the theory must guide the data creation or collection, and reciprocally the data will help inform the theory. The work of art, or poem, or performance must say something more or different than writing alone. Art does not illustrate data; it should illuminate and transform (Lawrence-Lightfoot & Davis, 1997; Sameshima, 2007).

When we create artwork, we relate to the world in a new and different way. Art materials allow visceral communication of felt relationships (Irwin & Springgay, 2008; Sameshima, 2007). Arts-based data forms or takes apart multiple felt perspectives under the guidance of theory. The artist/teacher/researcher is not searching for evidence to support a hypothesis. Arts-based research untethers the researcher to allow the exploration of uncharted seas.

## Data Analysis Factors

Similarly, data analysis may be influenced by theory or by other research methodologies. In the example below, the researcher, Karinna

Riddett-Moore, was influenced by practices in narrative storytelling (Barone, 2001; Hankins, 2003); educational criticism (Barone, 2001; Eisner, 1991); and the work of deconstruction (Derrida, 1988b; Flax, 1990; Lather, 1991). Data analysis is any technique or practice which helps reposition the data and further open up the topic being questioned. For example, the creation of portraits can be considered data collection and analysis, for they can capture the probing and layering essence of qualitative research (Lawrence-Lightfoot & Davis, 1997). When an artist creates a portrait, he or she strives to represent the essence of the person being portrayed. Yet a portrait is never exact; it is a rendering of reality. It is crafted. An arts-based researcher must learn to craft data as an artist crafts a portrait. Like an artist makes decisions concerning the colors, line quality, and scale of a portrait in order to convey mood, fit a style, or share a story, an arts-based researcher will alter and rework data in order to gain an aesthetic wholeness to the research (Sameshima, 2007). Decisions made around data analysis should be guided by the researcher's theoretical framework. As such, the re-presentation of the data may take different forms. These may include, but are not limited to, poems, explicitly fictive writing, theatrical presentations, or works of music.

## Example of Karinna's Arts-Based Data and Analysis

**An overview of Karinna's conceptual framework for her research.** Here, I, Karinna, provide an example of teacher research with data collected and analyzed using the methodology known as a/r/tography (which Richard and I discussed earlier in this chapter). My research site is my middle school classroom. My research asks, what do my students become through the making of art? The question grew to ask, what do I become by making art? Although my research spanned multiple school years, I finally chose to focus my study on the months where a disruption in my personal life initiated a disruption in my concept of curriculum.

A/r/tographic research does not have a set method for data collection; instead the researcher uses *renderings*, which are described as "theoretical spaces through which to explore artistic ways of knowing and being" (Springgay et al., 2005, p. 899). Yet, what does it look like to explore a theoretical space through artistic means? What kinds of data might I, as teacher/researcher, collect or create? In this example, I

explored how my art class of middle school–aged students develops an *arts of living*. The term "arts of living" is defined as how we learn to perceive the quality and qualities of things, develop practices that help shift our perspective in order to deepen our understanding of others and create ourselves as ethical subjects. In the study, I fulfill a research role of both teacher and artist. I sought to create and implement curricula that helped develop my students' sensitivity to qualities: qualities in objects, relationships of qualities in works of art (Dewey, 1934/1989; Eisner, 1994), and qualities of relationships in each other.

Here, Foucault's theory of care of the self (1982/1997b, 1984/1997a, 1985/1986) forms the critical theoretical framework for the research. For Foucault (1984/1997a), care of the self meant constituting the self as an ethical subject, not by simply following moral codes, but rather by developing a relationship to the self that was steeped in a vision of the perfect self. This vision of perfection would guide one's code of conduct, and one would behave in a moral way and hold the self to this code of conduct (Foucault, 1984/1985, 1984/1997a). Practicing care of the self was ethical in and of itself and would also lead to ethical relationships with others (Foucault, 1984/1997a).

Foucault's theory is poststructural (Deleuze & Guattari, 1987) in the sense that it questions how we come to know. In particular, we don't know disembodied stuff (remember Kant's admonition that we are not God). We only know how other people and objects are in relationship to ourselves. We do not know things; we know relationships. We care about things with which we have authentic relationships. Thus, there is a shift from knowing to caring. What you know is not as important as how you relate to others, how you use your knowledge, and how you act within those relationships. Most importantly, how you relate shows, first, a care of self and, second, a care of others, which is a foremost concern of education. It is learning to be in the world. It is not learning a bunch of stuff that you forget twenty-four hours after the test. Foucault's theory focuses the research about classroom learning on actions of the students. It asks who and what have the students become through shared experiences in the classroom and the intimacy of learning together through the production of art.

Just as my research asks what the students become through the making of art, a/r/tography also asks what the teacher/researcher becomes in a correlated act of art making (Irwin & Springgay, 2008; Sameshima, 2007). In this study, I used fabric arts to explore the relationship to my students and to work through my own challenged definition of caring in and outside the classroom. My search for

understanding of transformation through art making began as an exercise in empathy toward my students, trying to reinvent the experience of learning a new material in order to understand their hesitancy and fears in sharing their personal lives through art making. I chose fabric, as it was an uncomfortable material for me. I feared it.

Working with new material was not the only disruption that I was dealing with in my life. Another of my research questions also asked how my students learned to care in my art room. In the course of the conduct of my research, unexpected events in my own life brought into question my own conception of what it meant to care. Caring became terrifying.

In facing my own fear, I found through the process of working in fabric a personal return to passion and desire. In encountering these qualities with new eyes, recognizing their necessity for authentic and personal art making, I also recognized that they were absent from my curriculum that sought to teach care. In addition, by disorienting myself through art, I discovered new empathetic insights into how students felt disoriented within my curriculum. Through my art making, I created data that provided me with insight into becoming a better teacher.

Thus, my art making did not illustrate an idea. My art making became a site of my own research. I made my data. I used photographic journaling and poetic journaling to document my process of working in fabric. In turn, the created data were helpful tools in analyzing my primary research interest: the lifeworlds of students and the meaning they created through experiencing my curriculum. Finally, the documentation of personal art making became essential to sharing the story of my exploration into the meaning of caring.

In discussing the validity of ABER methods, Rollings (2010) says that they require a type of interpretive validity, because unlike scientific inquiry, where a cause can be inferred by a preceded effect, in arts-based inquiry there are multiple causes and multiple effects that cannot be isolated from each other. There are many factors that contribute to the outcome or unfolding of this research, perhaps too many to comment on and critique in depth. In order to filter them and trim the excess (to once again engage in the renderings of a/r/tography), I revisited my original research questions as a part of the data analysis:

> What kinds of art experiences lead to deeper aesthetic engagement with objects, people, and environment?
>
> How might these experiences encourage students to develop an arts of living?

> How, through the arts, might they learn to perceive the quality and qualities of things and develop practices or habits that help shift their perspective in order to deepen their understanding of others and create themselves as ethical subjects?

More simply put, how do we learn to care for others in the process of making art? I discovered that as the study progressed, I was more interested in the moments when students were able to broaden their definitions of concepts, which seemed to occur when they were presented with a concept or idea that contradicted their way of thinking, or perhaps was just a new way of approaching a concept they had not considered. This seems to me one of the strongest elements in learning to care: being able to imagine another way of being. This is, perhaps, the greatest connection between caring and deconstruction.

Developing an "arts of living" began when students (and I) felt comfortable enough to put into question that which they believed to be true, when they began to deconstruct their lives. I believe this occurred through two important elements in the art curriculum: (1) when opportunities were provided for students to experience moments of disruption, either by working with materials or engaging in reflective practices (writings and discussions), and (2) when art making was approached from the perspective of exploring a theme, not merely representing objects or ideas through media, which allowed for more relational, reflective art making.

These works of art and reflections by the students were like pins holding the edges of what I thought was a rapidly unraveling curriculum. These moments seemed to guide the study as they each reflected something more pivotal within arts education as well as my own journey through caring. These were the students who engaged in moments of disruption and in turn altered the fabrics around themselves. The shifts are, from the perspective of a/r/tography, ethical in themselves and a step into practicing caring in the classroom. A/r/tography recognizes ethics as "participating in a network of relations" (Lajevic & Springgay, 2008, p. 68).

Pulling from various feminist theorists, ethics can be seen as how one encounters others as other, a shift from getting to know the other (knowledge gained through insight leading to understanding) to "an inquiry that creates bodied encounters that are themselves ethical in nature" (Lajevic & Springgay, 2008, p. 69). Ethics, then, is "not just different forms of knowing, but different forms of being, and it is this complicated and responsive understanding of lived experience that is at the heart of a/r/tographical research" (p. 71). Likewise, Foucault

**Figure 6.1** Karinna J. Riddett-Moore, *Ecclesiastes 3:1–8/Field View, Back,* 2011, altered fabric, 33" × 27" × 44" × 50", photograph used with permission of author

saw the work of ethics as problematizing how society regenerates itself for the means of "creating new modes of being together" (Foucault, 1997a, p. xxxvii). I believe these moments of disruption were students entering into Foucaultian new modes of being together.

**Excerpts from Karinna's research study.** Consider the following four selections from my dissertation: figure 6.1; journal entry 1: "At the Limits of Caring"; and figure 6.2, coupled with a second researcher journal entry and analysis. While these are only fragments from the entire body of research, they are used here to give insight into the questions, (1) What are data? (2) How do we work with data as artists and teachers? and (3) How can arts-based data inform questions of curriculum and practice?

**Researcher Journal Entry 1: "At the Limits of Caring "**

At the end of the day
when all is said and done
(yet some things are unsaid and undone)
what was it that made me know—
I am done?
How many times can you whisper to someone's back
—I love you—
and they don't turn their head on the pillow

to whisper to you?
How many times can you say
come back to me
come back to me
come back to me
before you stop crying out
  stop crying
  stop trying
  stop dying
stop looking into eyes that no longer glow for you?
How long do you stand on the altar
waiting for your love
to come out of the darkness?
There is a moment
between loss and desire
between past and future
between alone and lonely
that is just a place to be.
To be.
To be and know that
desire is not loss
future is not past
and alone is not lonely.
All that is real
is here and now.
Because you were never you
and I am no longer me
what else am I to do—
but believe? (April 25, 2011)

* * *

**Researcher Journal Entry 2: Untitled**

to make this yours
is to make it mine.
I will love you
even if you can't believe it
even if I can't remember it
because living between us
will always be
this love
neither of us can have
(March 7, 2011)

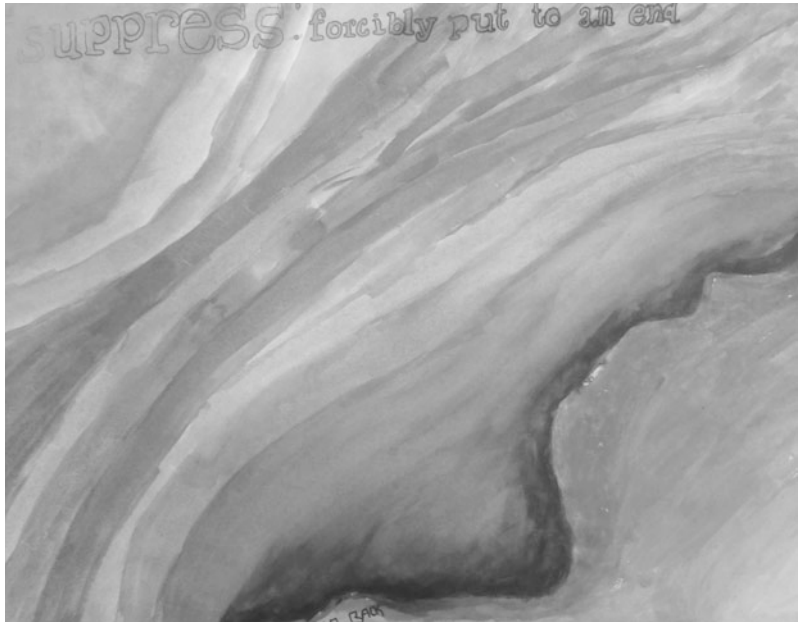


**Figure 6.2** Student work, *Suppress*, 2010, 24" × 36," photograph

## Analysis of Excerpts

This student work, *Suppress* (figure 6.2), embodied the possibility of an experience of disruption in a classroom assignment. A disruption is a moment, either through artistic material or through language, where a student (or I, in the role of artist) would enter into a space that was open to transition and reinvention. I've coupled it with my journal entry for many reasons. First, I have never felt an emotional connection with a student through their work before. This is a hard statement and realization after almost nine years of teaching. I have, perhaps, understood more about a student through their work, when the work spoke, or the student explained. I have, perhaps, felt compassion for a student when hearing a story of loss, fear, or anger that the child struggled to represent. Until this student painted her definition of the word "suppress," I had not felt an embodied, deeply seated connection with a student. The work reached out to me, even as I watched her paint the blurred black line that attempts to divide crimson from violet; it was my world turned to color and motion. It was riveting to behold.

The second reason I've coupled my work with hers is an attempt to bring closer the parallels in our lives with those of our students. Often we dismiss the ways students view things like love. How can they possibly know of "real" love as we do? Aren't they too young? Yet they do know. They do feel it. It is real to them at that moment, and it is their experience of love (or hate, or fear, or desire, or longing). It is all they know of that experience. How we react to our students' emotional needs, to their views of life and its problems, tells them something of how we value them. As art teachers, we owe our students a space for art that is personal and reflective. It is easier said than done. Of course we want our students to make art that is expressive and relational, but actually doing this requires that we be present to our students and their needs, however insignificant they may seem from our perspective. This is the ultimate challenge in teaching with an ethic of care: caring when we really don't.

The third reason these works appear together is to illustrate how image and word may not be illustrative—but complementary, contradictory, and relational at once. There is a natural desire for explanation when we teach and research. We automatically see similarities in images or writings and want to place them together, to categorize and order. But presenting a work of ABER in a/r/tography is about opening up the space, rather than making it smaller and tighter. A/r/tography opens an arena of questions. Image and word exist to trouble, probe, and question. In arranging this work of research, art, and curriculum, there were times when I resisted moving things into their "proper" categories. Dates are not linear, and themes do not begin and end. It is a part of working in excess and within a reverberation. Reverberations are the "attention to movement" that "shift other meanings" or "excite possible slippages of meaning" (Springgay et al., 2005, p. 906–907). Reverberations open spaces of new possibility. Our research is movement in a defined arena: crossing spaces, coming up against limits, and doubling back to cross the space again.

## Doing the Work of ABER

> You have to be patient to sew.... Now I know how my grandmother did it and raised five kids. It makes you patient. Just the steps—planning the pieces, organizing your threads and bobbins, pinning patterns, cutting, pinning again, thinking about what needs to be inside out or backwards to end up the right way. The whole thing is maddening sometimes. But as I work, there is a feeling of comfort; maybe it

> is in the repetition, where you just run the fabric through the machine like it is a part of you. You aren't even thinking, just sewing. And suddenly I am connected to my grandmother and I remember hearing the hum of the sewing machine from her room in the summer. I was always drawn to that sound, wondering what she was making. And I would come back to her room and sit on the bed, breathing in the smells of the fabric and laundry detergent. And she would talk to me with pins in her mouth, never needing to spit them out. (Journal entry, October 10, 2010)

This brief journal entry alludes to an important aspect of "doing the work" of ABER, particularly in the methodology of a/r/tography, which is that the art making, teaching, and researching are all embodied and intertwined in a personal, reflective, and relational way. When I began the curriculum study after two years of doctoral classes, I had not yet begun working in fabric. I spent two semesters in a pilot study with my students during which I worked from the identity of a teacher and researcher, but I hadn't figured out how to relate to my students as an artist. The art making first evolved from a desire to empathize with my students' fear of new materials and grew into a medium through which I thought about and began to live my research. For example, I began by making bibs, which took me about four weeks. Each time I sat at the sewing machine to work on the bibs, I would think about the steps I needed to take to complete the bib—pinning, trimming, sewing, and such. Yet as I worked, I would let my mind drift into recalling memories. Often they were memories from my childhood, like the reflection above. Sometimes they were memories about a student who was frustrated in class. All the while my fingers were busy with scissors and pins. I began to relate to my students' frustrations, or I began to see errors in my teaching through the artwork I was doing. I never found value in having students "copy," yet here I was, learning to make a bib by taking apart and copying another bib. I found comfort and confidence as an artist in completing this small artwork of making a fabric bib. Perhaps I needed to rethink the place of "copying" in the art classroom.

These were all moments of data collection and data analysis. Understanding that you have to be patient to sew altered not only my practice in sewing, but my attitude toward my work of art, *Ecclesiastes 3:1–8* (figure 6.1). I originally wanted the black birds to be symbols of destruction, tearing my thing of beauty. But I discovered that I couldn't sew when I was angry, and I had to treat the birds with care as I hand stitched their tails. Slowly, I began to see

how this relationship helped me change steps in my curriculum writing. I saw that I needed to give time for my students to work at their own pace, to experiment with materials in a safe environment, and to begin where they are. All of these themes and analysis were done as a result of spending time in the relationship of art making, teaching, and researching. Reflection happened as I worked, as I taught, and as I wrote. They were not separate from each other, but constantly playing off each other.

The final work of art, *Ecclesiastes 3:1–8* (figure 6.1), took about two months to create, and that included the time to write and photograph the reflective journal entries. During that time, I was also writing the final copy of the dissertation. I knew there were themes that had emerged in the curriculum and in my definition of caring. In writing, I chose images and journal entries that might open up the definition of caring in the same way I had felt the definition open up for me in my personal life and through the artwork. Just as the realization that I could not sew a bird in anger had affected my pedagogy, I wanted to craft the writing in such a way that I allowed the audience to feel troubled, to feel tension, and to feel the confusion that I felt in exploring this topic of caring. These motives guided the selection of data and analysis. When an image or journal entry felt juxtaposed in order to create a tension, I knew they were working. Yet I also wanted the work of writing to express the ups and downs of the journey through caring. This helped guide the overall format of the piece, which led to a very "broken" first three chapters and a smoother, more composed final two chapters.

**Ending reflections on these excerpts.** "Many of those who speak for imagination, possibility, the kindling of hope . . . remind us of the need to acknowledge the darkness and, working against that darkness, to conjecture, to design, to protest, to imagine, to transform" (Greene, 2001, p. 120). There are three thematic ideas that this research provokes: collapsing as a space of learning, personal praxis as a part of living inquiry, and the role of artwork with/in the study.

***Collapsing.*** Poststructural research troubles all that we assume to be true and stable (St. Pierre & Pillow, 2000). The point is not to leave ruins; theory puts things in play. Poststructuralism, by its very nature of critiquing the structures, has had and should have an effect on everyday life, as it seeps into the nature of our thinking and being (St. Pierre & Pillow, 2000). During the time I was engaged in researching, my world was collapsing around me. All that I knew to be true and real collapsed. I was left in a ruin. Curriculum can do

the same thing. So can art. Collapsing exposes us, our fear is made visible, and our place of support and comfort is gone. The question I hope this research opens up is, what do we do with a collapse? How do we shift our perspective in order to not only survive the collapse, but also endure?

***Praxis and living inquiry.*** This study is, in all aspects, a form of living inquiry. Coming to understand a/r/tography, its methodology, and theoretical basis was praxis, a personal disciplined doing that had to be lived. I learned how to be attentive to the renderings, often having to experience them first before being able to use/apply/trouble them. They became a sort of daily exercise in artful living. It is hard to demonstrate through writing alone how you come to live a theory, or how theory and practice become embodied. Much like the process of working in fabric, I needed to take time to pull thread through fabric to refine the precision of hand stitching. I needed to cut away the excess in order to form the shapes needed for making the fabric birds that evolved in my art making. I needed to reform the crinoline in order to make the smooth folds of the dress appear as tied and twisted nests. All of it took practicing wholeness-in-process. Without directly stating it, I tried to convey how wholeness-in-process also means being attentive to the parts that are not whole. One never knows if completion or closure occurs. The research does not answer a question; it does not present. It is meant to invite—invite discussion, invite troubling, invite another perspective on the intricacies of caring, specifically of caring in art education.

***Artwork with/in the study.*** There are three main forms of artwork in this study: fabric arts, photography, and writing. When composing the final product, I looked at it as a work of art, wanting to place the elements strategically so they would work in unity and contrast at the same time. I had to continue to revisit my data in order to find and arrange the right tone and hue in the piece. Just as I selected textures and shades of black fabric for the birds, I selected journal entries, student work, student reflections, and photographs to tell the story in a way that might encourage audience reflection and participation. I wanted the reader to feel the tension that existed, and to see the change in curriculum and pedagogy that happened as a result of this research into caring. This is probably the area I felt needed more explanation, or perhaps just more "shots" of the relationship. I wanted to avoid spelling things out clearly, which typically happens when I lower my "teacher/researcher" mask and write with authority. I wanted to tap into the fact that I was letting go of the authority in

my classroom in order to listen to my students and relate to them as artists in the midst of their own development of living.

## Conclusion

Arts-based research is not about proving answers; it is about asking better questions (Barone & Eisner, 2012). Arts-based research is not about making beautiful objects that evoke a sense of beauty and admiration. Arts-based research uses objects that move in a place of metaphoric juxtapositioning and somatic, qualitative relationships to disturb and trouble our existing discursive understanding. The purpose of these provocations is to provide insight into making the life-worlds of our classrooms a better place. This is the bottom line. Does this research open a new discussion through new insight into who we are as teachers and the experiences that students take with them through encounters in a classroom?

There are three major questions at the heart of arts-based educational research: (1) What are data? In particular, how do we as researchers do more than record data? How do we contribute to making the data we seek to study? (2) Once we have the data, how are they analyzed? How is our analysis its own recreating of the data? How can our forms of research analysis overlay our artistic practice? How, as artists and teachers, do we work with the data? and (3) How can arts-based data inform questions of curriculum and practice? How is a work of arts-based research more than a beautiful, poetic moment, but an insightful piece of research that expands our knowledge of teaching and students?

## Key Terms

**Subjectivity:** Subjectivity refers to an individual's feelings, opinions, or preferences. It has traditionally been seen as the opposite of objectivity, which refers to dispassionate analysis and coolheaded reason. Therefore, a conventional view is to eliminate, or at the least avoid and constrain, subjectivity during the conduct of scientific inquiry. Arts-based research rejects conventional wisdom.

Alan Peshkin (1988) championed the positive role of subjectivity in qualitative research. He argued that the subjective lenses of the researcher were a powerful, and useful, means for shaping data. The

challenge to the researcher was to become aware, through self-reflection, how his or her personal subjectivity was driving the collection and analysis of data. How the researcher chooses to do this is a problem of disinterestedness (a further discussion of this term immediately follows).

As postmodern thought has argued that meaning in the world is personally constructed, Tom Barone (1992) has argued for an abandonment of the terms "objectivity" and "subjectivity." Instead of objectivity, he proposed critical persuasiveness as a standard for research. According to Barone, whether research is objective or subjective misses the point. Research, whether it is rigorously objective or subjective, needs to be evaluated on its capacity to provide useful insights into addressing practical problems.

**Disinterestedness:** "Disinterestedness" is a term used in the discipline of aesthetics. It refers to a necessary detachment from subjective feeling, which permits an accurate appraisal of beauty. Thus, the concept closely links to objectivity.

Hanna Arendt (1982) sees disinterestedness as critical to authentic empathy. It is the ability to leave our own subjectivity behind and feel the world as another person does. It is only in this letting go of self that a hope of genuine community is possible. Clifford Geertz (2000) sees disinterestedness as an exquisite balance between the tensions of subjective aesthetics and mechanical, objective scientism. He maintains that real science can only occur at the crossing point of these two tensions. Research that swerves too far into either rudderless subjectivity or narrow scientism is ultimately flawed and potentially morally irresponsible.

Thus, in arts-based research, "disinterestedness" refers to a rigorous, deconstructed subjectivity, essential to the ethical conduct of science that seeks dialogic communities. An arts-based researcher should probe and deconstruct his or her subjectivity through disinterestedness.

**Phenomenology:** The formal discipline of aesthetics was established in the mid-eighteenth century as a means of discussing ways of knowing that occurred outside of linguistic or mathematical symbols (Bowie, 2003). As the term "aesthetics" became confused with judgments of beauty, preference, and personal taste, phenomenology arose in German philosophy at the beginning of the twentieth century as the study of the totality of experience. An experience is more than the sum of its parts (Heidegger, 1971). A phenomenon is a fully sensed entirety that generates new directions of possibility. It becomes a lifeworld (Husserl, 1936/1970). Phenomenology is particularly

important to postmodern French philosophy (Deleuze & Guattari, 1987; Lyotard, 1984; Merleau-Ponty, 1962).

**Qualitative reasoning:** John Dewey—as an American pragmatist—attempted to bring concepts of phenomenology into educational discourse. Instead of using oblique European language, Dewey (1934/1989) said that a phenomenon was an experience. An experience occurred outside of language, through the perception of relationships of qualities. A quality includes colors, shapes, lines, texture, space, or what we call the elements of art. Relationships of qualities include movement, contrast, balance, repetition, or what we call the principles of design. Thus, the elements and principles create a grammar for qualitative reasoning outside of symbolic thought. Dewey made the highly controversial claim that qualitative reasoning is a more rigorous form of thinking than semiotics. Elliot Eisner (2002) championed visual art as a discipline that teaches qualitative reasoning (Siegesmund, 2005).

## Activities

Individually or in a group, explore these essential questions in the following activities:

1. Explore the question: What are data?

From the provided examples of Karinna's research, consider the following questions:

   a. How did you react to the data (images and reflections) by themselves? What feelings or memories did the data evoke?
   b. How is the researcher using the data to give insight into the nature of caring?
   c. In ABER, participants, and/or the researcher, may create data. These excerpts provide examples of both. In what ways is the data influenced by the researcher's theoretical basis?
   d. In what ways does the data invite audience participation and reflection?

2. Explore the question: What are data? (reverberation 2)

John Dewey maintains that we think outside of relationships of qualities. The elements of art are examples (not definitions) of qualities. The principles of design provide examples (not definitions) of relationships of qualities.

a. In a group, look at a selected work of art. What do you see? When you respond, do not identify symbols (e.g., I see a man, I see a cow, I see a bowl of fruit). You may only identify a quality and relationships of qualities. For example, you may see washed out, dripping colors. A washed out, dripping color is a quality. What others qualities can you find in the picture?
b. As qualities are identified, speculate how the qualities interact with symbols you see. For example, now identify that there is a man in the picture, but if he is painted with washed out dripping colors, what might that tell us about this man? If the man was painted in sharply defined, bold opaque colors, how would we read the symbol of the man differently? In this way, students can explore how different meanings are generated through relationships of qualities.
c. Some works of art, such as Richard Diebenkorn's *Ocean Park* series, are built virtually entirely on relationships of qualities, with few, if any symbols. Can you find the levels of meaning conveyed through the relationships of qualities in a work like *Ocean Park No. 54*? Can you tell the story that the relationships of qualities create within *Ocean Park No. 54*? Note: John Elderfield is chief curator emeritus at the Museum of Modern Art in New York. His discussion of Diebenkorn's *Ocean Park* series can provide insight into answering these questions (Elderfield, 1997).

3. Explore the question: How do we work with data?

a. Visual images as data can be objective, formative, or generative. Even though you may not be trained in the arts—even if you are convinced that you have no talent—you live in a visual world. You take visual images with your camera or cell phone. Look at the pictures you have taken. What kind of images are these? Are they objective, formative, or generative? You probably have a form that is most natural for you. Can you try to make a different kind of visual image?
b. Magazine advertising is another kind of visual image making that we are all very familiar with. Can you alter and play with advertising and magazine images by cutting, ripping, and juxtaposing these images into different meanings? Can you make a humorous image? Can you make a serious image that speaks to an issue of importance to you?

4. Explore the question: How can arts-based data inform questions of curriculum and practice?

a. Visual journals are an excellent way to begin to explore issues within your own practice (Lajevic and Springgay, 2008). Sara Scott, a nationally board certified secondary art teacher and doctoral

student at the University of Georgia, asks preservice teachers to create a visual journal image in response to questions such as the following:

- It is difficult to separate ourselves from our inner critic's voice. As elementary art educators, you have the power to help children silence their inner art critic before it stops them from making art. Create a journal entry showing the battle between a child and their inner critic. How will you help your students win this fight?
- Create a visual metaphor that represents the relationship between a child viewer and a work of art.

b. Reflect on key terms and consider the following poem that comes from Karinna's research journal. How is subjectivity important? Does the poem display disinterestedness? Is this poem true or is it a work of fiction? In what ways could this poem be a fact—that which renders the truth-bearer true? What can this poem tell us about curricula and the lives of the children whom we instruct? How does this poem give insight into becoming a better teacher?

**Reflection on a Rome Binder**
Their names organized
in smooth plastic film
protected
from the elements.
seeing their names
their Full Given Names
somehow I feel closer to them
Can I see them
as children?
Children whose parents might still crack their door
and peek in on them while they sleep
making sure bodies are covered, lights are out
kissing their forehead while they dream.
Children whose parents still see in their face
the traces of the infant
they held in their arms.
Can I see them
as adults?
Adults who will live without me
perhaps without even the memory of me
except for one day in class
or one week in Rome.
Adults who were formed now
even as I ignore them

worrying about my life
Adults who we shook our heads at in meetings
wondering how they would survive
if they don't just grow up.
Can I see them
as they are
now
in my room
in my space
in my life?
Students who daily wonder what this means
to be in/between
child/adult
school/life
lessons/lessons
Who am I to them?
Who are they to me?
And yet this binder
like the ones from trips years ago
Will remain a record
of these seven days together
I hope it is more
than names
in smooth plastic film. (Journal entry, March 22, 2011)

c. In what ways is this poem rigorous? What skills do researchers need to develop in order to engage in arts-based research? What are some habits of mind that make rigor accessible?

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# Chapter 7

# The Value of Portfolio Data in Action Research

*Doug Boughton*

## Introduction

Data is the cornerstone of action research and may take many forms such as interview notes, documentation of observations, video and audio recordings, photographs, drawings, graphs, charts, curriculum documents, meeting records, policy documents, and so on. For those engaged in action research in classrooms, one of the most commonly utilized forms of research data is the artwork made by students. From this work, a great deal may be learned about the artistic capabilities of students and their learning (or lack of it). All forms of data produced by research subjects may be regarded as *artifacts*. For the purpose of this chapter, we will focus on the value a specific class of artifact data known as the portfolio. Strategies for gathering and managing both traditional and electronic portfolios, data analysis, and interpretation of those data, as well as procedures for judging the quality of portfolios, will be discussed in the chapter.

## What Is an Artifact?

Before proceeding, it is necessary to first examine the notion of "artifact" in a little more detail. An artifact may be regarded as something made by humans with specific intent or cultural purpose. It evokes meaning that may be understood by those who understand the cultural context. In a sense, each classroom creates its own mini cultural

environment in which specific knowledge is generated and particular rules for behavior and taken-for-granted assumptions are developed over time. The artifacts (in the case of art education, art products) generated by students in that classroom will express, to some extent, the shared cultural knowledge of that classroom, but more likely will reference their own personal lives and the larger cultural framework of their immediate community as well.

Other data forms, made by teachers and administrators in schools, such as curriculum documents, policy statements, and records of student achievement that provide information about what students are expected to learn, the conditions under which they experience schooling, and how well they are doing, are also artifacts created in specific cultural contexts. To understand these artifacts, it is important for any researcher to understand the culture. For example, a school in an inner-city neighborhood may reflect different curriculum interests, different policies and expectations for behavior, and different standards of achievement than a school in a wealthy suburban neighborhood.

The single most important issue for an action researcher is to understand the importance of interpretation in conducting the analysis of artifacts. Typical anthropological research begins with the collection of artifacts; proceeds to analysis of qualities, structure, and composition; and ends with an interpretation of the meaning of those artifacts in the context of their original use, followed by discussion of implications that can be drawn for contemporary human life (Lewis, Jurmain, & Kilgore, 2008). Procedures followed by anthropologists are scientific, beginning with careful empirical observations, measurement, and categorizations. The methods used to analyze anthropological artifacts may include high-tech tools such as radiocarbon dating, DNA analysis, and elemental fingerprinting.

In the classroom or art class, of course, we are not dealing with artifacts from the distant past, so there is little need to use this kind of sophisticated technology to identify the composition or qualities of the artifacts we may choose to use as data. But the principles underlying the research methodology still apply. The research begins with careful description and categorization of artifacts, proceeds then to interpretation, and concludes with implications for practice. While doing this analysis, it is important to keep in mind that the meaning of student artworks is not self–evident, and the values employed to interpret and judge those works will be influenced by context.

For the purpose of this chapter, we will be looking only at methods for collecting, managing, and analyzing portfolio artifacts. Consequently, our focus will be limited to the problem of making sense of products created by students in the art class. Those products collected together become portfolios.

## What Is a Portfolio?

Everyone in the visual arts knows that a portfolio is *a collection of work accumulated over time*, so why do we even need to discuss the question? It is because portfolios can serve multiple purposes depending on the reasons for collecting the work and the motivations that drive the production of specific artifacts. Portfolios can be as simple as a collection of teacher-directed class projects, but they can also be a rich source of student reflections and student-initiated work created outside of class. For the purpose of research, the investigator needs to pay particular attention to the design and collection of portfolio artifacts in order to maximize the rich potential offered by this kind of data. Decisions about the content of the portfolio will be shaped by the research questions.

For example, let us assume the researcher is interested in conducting a study to discover if a specific teaching method using directed observation strategies is effective in improving students' abilities to make drawings of a landscape that are more proportionally accurate and more inclusive of descriptive detail than would otherwise be the case in the absence of instruction. The data required for a study such as this would be limited simply to a preinstructional and a postinstructional drawing for each subject. Each of the pre and post drawings could be coded and arranged in random order. A group of three or more judges using a rubric could rate the degree to which proportional accuracy and inclusiveness of detail have been achieved. A statistic, such as an *interrater reliability coefficient*, could be employed to determine the degree of judge agreement. If judge agreement was high and the postinstructional drawings achieved a significantly higher score than the preinstructional drawings, then it would be safe to claim that the instructional method was effective for the chosen population of students.

The above illustrates a typical experimental quantitative research design that could answer questions related to causes, that is, whether a specific methodology may cause an improvement in drawing skills. Such a finding, while useful, is limited to the claim that the teaching

method will predictably improve the drawing skills of most students. Many of the more important questions are left unanswered, such as "Why did the method work?" "What did the students think about the method?" "Did the students even want to improve landscape drawing skills anyway, or did they have a different preference for subject matter?" "Were the students more or less satisfied with the more accurate drawings?" "Did some students benefit more than others, and if so, why? Were talented students assisted or inhibited by the method?" In short, the important questions that are left unanswered are those that explain the reasons for human action.

The portfolio has the capability to provide forms of data that can assist with these crucial questions. To ensure that the desired data are captured effectively, the researcher must set up the portfolio so that it addresses the most important research questions for the study at hand. Here are three kinds of data that can be collected using portfolios. Each of these can offer powerful insights into the ways that students think about their work.

**Artwork produced or completed outside of class.** This kind of work has its origins in class, but the ideas extend outside the classroom walls. The interest generated in class propels students to complete class projects, or preferably, initiate related work outside of class. The way in which this artwork begins is when the teacher directs students to include content in their portfolios that is *embedded but open-ended* in the program content (Phye, 1997). The term "embedded but open-ended" is used by Phye to describe one of the characteristic advantages that portfolios provide when used in conjunction with teaching programs.

This idea means that the portfolio entries are derived from regular instructional events and are not the result of "on-demand" tasks. Students should be free to interpret the ideas encountered both inside and outside class and to develop independence in their exploration of art ideas. This procedure enables students to take risks and move their thinking and art making beyond classroom exercises. Taking responsibility for learning and developing the capacity to work independently are important indicators of good art learning. Not only does the portfolio serve as an assessment tool here; it also plays a vital role in the meaningful elaboration of curriculum intentions. In short, the portfolio becomes integrated with the curriculum in very important ways and is not simply a repository for all class assignments set throughout the year. The obvious benefit of this kind of portfolio data to action research is that the teacher (as researcher) has access to data that provides insight

into student thinking that has its origins in the curriculum but is not constrained by classroom activity and teacher control.

The portfolio without the characteristic of embedded/open-ended content is made by students whose teacher defines the outcome of each project rigidly, and who also decides what products must be included in the portfolio. Such practice will ultimately proscribe the form and content of the portfolio. At the end of the term, semester, or year, students in the classes of these teachers will typically present portfolios that look very much the same as each other, with products that meet the common criteria demanded by the teacher. While this might be desirable for specific research projects, these kinds of portfolios do not reflect the students' capacity to work independently; nor do they reveal the degree to which students are willing to take risks in order to extrapolate from and interpret the ideas presented in class. The measure of an effective art program is more clearly demonstrated by evidence of student risk taking and the pursuit of student interests outside of class, rather than by entirely teacher-controlled outcomes.

**Self-selected entries.** A second important data source offered by good portfolios is provided by student *self-selected entries*. This kind of data is produced when students are invited to choose at least some of the entries in the portfolio. Without student choice, there is no indication of the students' capacity to make informed decisions. Often it is possible to discover as much about a student by what they choose to include as it is from the quality of the work itself. Clearly, the degree to which this is possible is determined to some extent by the age and sophistication of the students. Nevertheless, some choice is possible at all levels of schooling.

**Student reflections.** The third, and probably most important, kind of data that good portfolios offer is the possibility to secure student reflections on their work. These reflections comment upon such things as the quality of the work, the manner of its production, the reasons for choices, influences on the work, difficulties encountered, new ideas to explore, and so on. In fact, this record of metacognitive thinking contains data of inestimable value to the researcher. Here are some examples from high school students' reflections:

> I found that seeing various artists' works has influenced me also. An example of this is Leon Kossoff's work: after seeing it, I immediately felt like painting in thick, bold brushstrokes. (International Baccalaureate student, May 1996)

And from another student,

> Drawing human figures is one of my strengths. I used to copy human figures from comics. But then I found out that I needed to learn how to draw real human figures, so I started studying realistic human drawings, and I learned a lot from these master drawings, especially Michelangelo, who is one of my favorite artists and has been my greatest inspiration. (International Baccalaureate student, May 2001)

## What Are the Benefits of Portfolio Data?

**Evidence of learning over time.** The greatest single benefit of the portfolio is the insight it provides teachers and examiners for understanding students' development over time. If students have the freedom to make choices about the content they include in their portfolios and are also encouraged to explore ideas independently, outside the limitations of classroom exercises, then a more complete picture of their intellectual pathway is represented in the contents. This is distinctly illustrated in school contexts when the portfolio serves a central assessment role, as is the case in England, much of Europe, some Asian countries, Australia, and New Zealand. The portfolio exhibitions offered by International Baccalaureate students at their final examinations following two years of independent studio exploration provide another rich example of this kind of data.

**Multiple data forms.** A second benefit offered by the portfolio is the capacity to offer multiple forms of data. The working portfolio, for example, provides the opportunity for teachers and students to reflect together on work done in the past and to revisit ideas and avenues that may have been forgotten or overlooked. The working portfolio contains thinking pieces, reflections, sample layouts, alternative solutions to visual problems, and so forth. This data offers, inter alia, a rich source of information about students' approach to problem solving, their personal interests, their capacity to think divergently (or not), and their understanding of and capacity to develop concepts.

The exhibition portfolio, on the other hand, performs the role of exhibiting students' best work. If students make their own choices about the "best work" to include in their portfolios, valuable data are provided to demonstrate students' value structures and their understanding of the ways in which qualities are defined in their particular

learning context. Typically in an examination context, students present their best work as an exhibition and provide the remainder in a folder to serve as backup records for reference, or to provide a point of discussion with the examiner or teacher. For the researcher, the combination of these different kinds of data presents a rich source for the investigation of multiple research questions. Further, recording the dialogue between student and teacher (or examiner) about the work offers another data set, allowing for the examination of different research questions related to both the student's and teacher's understanding of the nature of their engagement in the learning contract.

**Motivational gain.** A third benefit offered to researchers by portfolios is the motivational gain, or stimulus for students to produce more work (data). The opportunity for students to review their work and see improvement is a great motivation for production and a stimulus for learning. The reflective component of portfolios, if well used, can also promote greater involvement by students with their work and also help the researcher understand what is going on with student learning. Even math teachers have noted this benefit following from use of portfolios. Knight (1992), an algebra teacher, reported that because she used portfolios in her algebra class, she came to use more varied kinds of instruction (e.g., more problem solving and more long-term situational problems) so that her students ended up having a variety of items to choose from in creating their portfolio. This algebra teacher also noted that portfolio data gave insight into students' maturity, self-esteem, writing ability, and their ability to evaluate their own and other students' work (Knight, 1992, as cited in Phye, 1997). Two other researchers, Lamdin and Walker (1994), found that students often became much more reflective about their own mathematical performance when they assumed responsibility for preparing a portfolio of their work. Ultimately, the production of more reflective data as a consequence of portfolio use serves the researcher well.

## What Is the Value of Portfolio Data in Action Research?

**Availability.** The value of portfolio data in action research is evident in both direct and indirect ways. The most obvious direct benefit is in the ready availability of portfolio data should this form of data collection (and assessment) be incorporated into the instructional process. Typically action researchers are teachers who work with students in

the day-to-day routine of regular classroom events. Without significant change to classroom practice, portfolios can be built into the instructional process to make data easily available. However, the idea of portfolios for assessment has not been taken up widely by teachers in the United States and is not standard practice. Portfolios have been largely ignored both by the state high-stakes assessment programs as well as by classroom teachers of the arts in the U.S. Burton (1998) found that only 17.1 percent of art teachers in the U.S. use portfolio review as a primary method of assessment. Therefore, it is safe to say that for most action researchers it is more than likely that the portfolio will be a new practice to be developed for classroom use, so it would be prudent to trial this form of data collection prior to the research.

**Validity of data.** Another key concern for the assessment of student learning is to ensure that judgments about learning reflect the essence of the content. The research term for this is "content validity." Content validity "is based on the extent to which a measurement reflects the specific intended domain of content" (Carmines & Zeller, 1991, p. 20). An assessment instrument or practice of judgment can be said to have content validity if it is capable of reviewing learning that is central to the content of the discipline. For example, if one is interested in determining if students are able to draw sufficiently well to achieve their particular expressive intentions, there are research choices one needs to make in order to determine if they can do this. One choice is testing, which produces a particular form of quantitative data. Testing enables measurements to be taken, and the resulting data is returned as the number of correct responses. One could, for example, ask questions such as, "What is the correct way to hold a pencil for rendering?" "How should you lay out the page when beginning the drawing?" "What is the correct procedure for representing foreground, middle ground, and background?" Even more attractive for the quantitative researcher is the temptation to provide multiple-choice answers from which the students can choose their best response. The assumption underpinning testing is that correct answers indicate knowledge of the drawing process and the ability of students to achieve their expressive intentions.

Experienced teachers reading this will be saying to themselves, "No! No! No! That doesn't work!" And they are right. It is quite likely that even if students can answer all of the questions on a test correctly, they may still be completely unable to draw, and their artwork may fall far short of their expressive intentions. The most valid

way to determine a students' ability to draw is to make a judgment about the qualities evident in their drawing, rather than how well they can answer questions about the process. This of course is a more difficult method that often fails against the criterion of *reliability* that I will discuss in more depth later. Reliability is the capacity for different judges to attribute the same value to work of equivalent standard.

This is a very important distinction that illustrates the problem of validity in both the conduct of assessment and the collection of research data for analysis. In this case, a judgment arrived at through qualitative data analysis is more valid and more appropriate than measurements obtained from an objective multiple-choice test for the purpose of judging a student's drawing ability in the art class.

Questions about the appropriateness of testing, as a means to determine artistic understanding, have been raised by Gardner (1996), Sullivan (1993), and Zimmerman (1994), primarily because of the homogenizing effects of the testing process. Standardized testing using a series of discrete and unrelated items requires students to perform in ways that do not typify the kinds of behaviors that even young artists would use to display their knowledge in the broader social context. In that sense, testing is an "inauthentic" way to determine if someone possesses specific kinds of cultural and practical knowledge in the arts. Other shortcomings of multiple-choice tests have been widely reported in the literature. They often require only lower-order thinking skills, they fail to assess all the important and desirable educational outcomes, they can encourage teaching to the test, and they can be used and interpreted improperly (Cizek, 1993).

Authentic assessment strategies, on the other hand, engage students in long-term tasks and meaningful projects that are challenging, complex, and reflective of real-life situations (Gardner, 1996; Wolfe, 1988; Zimmerman, 1994). Assessment (and research) in the arts should not be conceived as information retrieval (Sullivan, 1993), but as a means to chart students' intellectual pathways. Insight into students' thinking and understanding is not always provided by end products.

## How Do We Gather and Manage Portfolio Data?

Prior to collecting any research data from children, it is imperative that ethical protocols be observed. It is possible that the study and

interpretation of work by children could reveal confidential information requiring careful security in the management, storage, and later discussion of the data. Typically, any research project conducted in a school or in conjunction with a university will require the completion of a human subjects form and the securing of approval from research or human resources offices.

Collecting portfolio data is a relatively simple process with two major alternatives. The first is to collect hard copies in the form of artifacts such as paintings, drawings, prints, sketches, notes, sculptures, models, and so on. Clearly the problem with this form of data collection is sheer storage space. Artwork consumes massive amounts of space, is generally not standard in size, and is hard to file. The key to successful research using hard copies is to manage an effective filing system, with each piece systematically coded and recorded for easy reference during the analysis phase of the project. The second alternative is to collect a digital copy of original artwork, which has many significant advantages in terms of storage, filing, and general organization.

## What Are the Research Benefits Offered by Digital Portfolio Data?

If, as a researcher, you choose the digital portfolio option, it is important to be aware that, by virtue of using this medium, the nature of student engagement with their portfolios will be different, and in some ways better for the production of data, than the traditional portfolio data set. Some of these benefits are described below.

**Efficiency.** By far the greatest number of references about the benefits of electronic portfolios has to do with the notion of efficiency in the handling and retrieval of data and images related to student work.

- Electronic portfolios show a clear picture of growth over time (Wiedemer, 1998). So do traditional art portfolios, but traditional portfolios are more difficult to organize chronologically and take far longer for the researcher to thumb through in order to analyze the sequence. Original work in portfolios usually goes home with students, and when they are kept, pieces are more likely to get lost or damaged. Also, individual photographs of student work do not reveal the organization of the portfolio. In short, the benefit here is data storage and management.
- Conferences about the research data are easy with small, convenient, and accessible documentation (Guhlin, 1999). Conversation with

co-researchers, teachers, students, and parents (if appropriate to the research project) becomes much easier when electronic files or hard-copy printouts of student portfolios are on the table. Reference is quick, and it is easy to compare data to other key references such as benchmark exemplars or comparative groups. This can also be done with traditional portfolios, but electronic versions are simply easier to handle. Again the payoff is efficiency.

- Fornander (1999) and Wetzel and Strudler (2006) also report the benefits of electronic portfolios, particularly their accessibility, portability, utility for review, and the capacity to widely distribute files. Information can be shared easily between co-researchers, making dialogue about images possible in a more efficient way.
- Storage is easier. Working with original student work presents enormous difficulties of storage, particularly if the work is large, if the research subjects are comprised of large group sizes, or if the work is in new media. Completed projects can be digitized immediately and not necessarily stored. This is a particular benefit for three-dimensional work (Tuttle, 1997). Far larger volumes of work can be stored on disk than could possibly be stored in an art room (Oros, Morgenegg, & Finger, 1998).

**Motivation.** The point was made earlier that traditional portfolios tend to motivate students to become more engaged with their work. For the researcher, this is a significant benefit in that more data frequently sheds a brighter light on research questions. Computers are a great motivational tool, and research seems to demonstrate that electronic portfolios are even more intrinsically interesting to students than traditional hard-copy format. Electronic portfolios encourage ownership, pride, and an increased level of self-esteem, a factor noted by Davis (1999).

Amy Kerper, a Northern Illinois University student researcher/observer of art teacher Karen Popovich's class, reported high levels of enthusiasm demonstrated by elementary students despite inadequate technology (Kerper, 2000). Kerper recorded many students' comments about the electronic portfolio experience. One student said,

> It will teach me more about computers when I have to do a portfolio later. It's making me a better artist by making me want to finish my artwork well so my portfolio will look nice.

Another student said,

> Because everything is neat it makes me feel like a better artist because I can look at [all] the work I've done.

**Curriculum effects.** I have noted some interesting curriculum effects in discussions with teachers who use electronic portfolios. Because the craft of constructing an electronic portfolio becomes so much a part of the curriculum, one teacher observed that the portfolio process put more pressure on her to clarify her explanations and assessment standards. In short, she found that it enforced a kind of discipline that was not apparent under traditional art teaching conditions.

Digital portfolios have the potential to stimulate students to further develop their art pieces made with traditional media. Once students have scanned their work, they realize the possibility exists to enhance it, or even redevelop it in digital form. The logical consequence of this form of development is that the portfolio itself has the potential to become a work of art, with the sum total of individual students' work becoming an integrated whole. Again, for the researcher, analysis of the decisions students make in constructing their portfolios provides rich insight into thinking.

**Expansion of the data source for potential research.** One of the great benefits of digital portfolios is that students' work is able to travel with them throughout their career (Fornander, 1999). This is a particularly useful benefit for longitudinal research. Given the relative ease of saving, filing, and sorting digital records, electronic portfolios offer the potential to track the artwork of individuals or groups of students over many years. Collecting and effectively storing large quantities of traditional artwork over years is simply prohibitive in terms of the demands of storage space.

Further, it is clear that investigation into student thinking and development as they engage with 3-D materials is significantly underresearched. If one seeks findings in the literature about children's artistic growth, most of the significant studies reference 2-D data, particularly drawing. In no small measure, this bias can be attributed to the difficulties of data storage and handling for researchers. Flat work consumes far less space and is easier to transport, handle, sort, and store. The advent of digital data offers the potential to revolutionize the study of students' work with 3-D materials. Video data and 3-D scanning technologies have created fantastic possibilities in this neglected area of research on art learning.

Because the electronic artwork can easily go home on a memory stick or disk after it is done, or even be accessed online from home, parents are able to be more aware of what is happening with their children in the art class. For the action researcher, this means that electronic portfolios now offer possibilities for research outside the

classroom since parents will have access to the digital portfolios created by their children. Studies exploring parental insights can greatly enrich our understanding of the learning experience in art classrooms.

**Assessment benefits.** Portfolio data provides one of the best sources of assessment information. Many action research projects contain assessment components, particularly if the research question requires investigation of some aspect of student learning or academic progress. Having listed the above benefits, it would be easy for the reader to assume that use of electronic portfolio data will improve the quality of assessment. However, none of the above advantages of digital portfolios have much to do with assessment itself. They have more to do with efficiency of data handling, motivating students, improving the curriculum, and ancillary benefits related to learning about computers.

Direct assessment benefits identified both in the literature and by my conversations with teachers around the world include these:

First, there is a benefit for student self-assessment. Learners are able to see the big picture of their own progress more easily. Because of the ready access to their own record of progress, students seem to become more aware of both the quantity and quality of their own work. Miller and Morgaine (2009) identified this benefit at the tertiary level, but teachers have also confirmed this finding with art students at the senior secondary level.

Second, some benefits for teacher/researchers include the following:

- Program accountability becomes more evident. Teachers are able to keep a more comprehensive record of student work and overall progress of student groups (Miller & Morgaine, 2009). Comparison with program goals is easier, making diagnostic assessment easier as well.
- Electronic portfolios are useful for benchmarking (Guhlin, 1999; Niguidula, 1998) and are also very useful for the development of exit standards (Fornander, 1999). Traditional portfolios also serve this function, but the digital form has far greater utility.

From the above, it may be safe to conclude that electronic portfolios can assist the assessment process by making it more efficient, more attractive, more portable, and more popular with students and teachers. But I have seen little evidence to suggest that analysis and assessment decisions are necessarily better as a consequence of digital

technology. This is because technology cannot make decisions of value for human beings. The computer is a tool for storing, retrieving, and presenting information, and no more than that as far as assessment is concerned. Human beings must make the judgment of quality and growth, and this requires human strategies, human interactions, and human sensitivities. More about this later in the discussion about rubric development.

## What Are Some Cautions Regarding the Use of Digital Data?

**Loss of fidelity.** Most of the applications of digital technology in schools seem to have been to record in digital form artwork made with traditional materials. No matter how effective the photography, there is a distinct loss of fidelity when original artwork is digitized. Nothing is as authentic as the real work. Loss of definition, loss of scale, problems with photography, distracting backgrounds, and presentational protocols serve to either obscure or enhance the work itself. While it may be more efficient as a form of record keeping, let us not be fooled into thinking that we can make better decisions about artwork by looking at an inferior or enhanced digital copy of the original. A greater volume of less authentic information is not necessarily going to lead to better judgments.

Let us consider the context in which digital technology can operate at its best for research and assessment. Digital portfolios are the best way to store and represent *digital* art, particularly animation and multimedia representations. But it is just as inappropriate to evaluate hard-copy representations of digital work intended to be viewed on screen as is to evaluate sculpture that was intended to be viewed in the round. The same loss of authenticity and fidelity works both ways. As it is with any tool, it is most appropriate to use it when no other tool can do the job as well!

**Balancing loss of fidelity with data management gains.** Having said the above, when the procedural advantages to a researcher offered by electronic data (and these are many) outweigh the disadvantages of loss of fidelity, then it will be prudent to use electronic data for research. But the question of best balance must be considered carefully! There are steps that may be taken to compensate for fidelity loss.

One effective measure is to ensure that all researchers involved in any analysis or assessment of subjects' artwork first view the original

pieces before referring to digital copy. In this way the original becomes embedded in memory, and the digital image serves as a reminder. If this is not possible, keep samples of benchmark work across research categories for reference to ensure that judgments remain grounded.

If the sheer volume of artwork/data makes it impossible for the originals to be made available to all researchers involved in the project (which is probably the most compelling reason to use electronic data), then it is important to ensure that full descriptive data, such as size, media, location, and any other relevant information that can affect perception, be provided with the digital images.

## Analyzing and Interpreting Visual Data: Qualitative versus Quantitative Analysis

Methods of analysis of visual data are as various as the research questions that one might choose to pursue across the full spectrum from qualitative to quantitative investigation. On the one hand, research questions that ask qualitative questions demand an analysis that may be based, for example, on critical theory, psychological theory, or sociological theory. Such analysis will require the researcher to interrogate images and explain their meaning based on context, character, qualities, frequency, and so on in order to arrive at answers to the research questions. As discussed earlier in the chapter, these kinds of research questions seek to understand the reasons for human action and require intimate knowledge of context to enable meaningful interpretation of artifacts.

**Reliability.** On the other hand, quantitative studies, like assessment, require systems of analysis that are capable of translating qualities existing in the work into measurable quantities. And this translation needs to be done reliably. This is one of the fundamental and persistent dilemmas for researchers and teachers alike. Remember the example discussed earlier of an empirical research project investigating ways to improve students' ability to draw landscapes accurately. To be sure about the "improvement" in students' drawing skills, it is necessary to develop a rubric to be used as a focusing device by independent judges to direct their attention to the qualities that the researcher has defined as indicative of improvement in the work. If the independent judges arrive at the same numerical value to express those qualities in each case, the researcher has achieved *reliability* of judgment. The term used to describe this form of judge agreement is "interrater

reliability." Reliability is a precondition for validity in empirical qualitative studies, and also for valid quantitative assessments.

**Validity.** Content *validity*, as previously discussed, also requires, in addition to reliability, that the assessment in fact measure the essence of the subject of investigation. In other words, if you want to investigate whether students can draw realistically, ask them to draw and judge the outcome. Don't ask the students questions about drawing, because the answers do not necessarily provide a valid indicator of the students' capacity to draw.

**Quantifying qualities and the need for judge agreement.** The previous discussion leads us to a hot research topic in art education. Can the qualities of artworks be quantified for the purpose of research? The answer to this question is a conditional yes, requiring that we accept a very important assumption underpinning this belief: if a quality is found to exist in an object, it must exist to some degree. If one accepts this assumption, the next step is to develop strategies to judge the degree to which qualities exist in artwork. Typically in research and assessment settings, rubrics are the instruments used to facilitate such judgments.

### *What Is a Rubric?*

A rubric is a set of descriptors that explain the kind of evidence that may be present in an artwork that represent the qualities a researcher/evaluator is looking for. Generally these statements are scaled in categories that illustrate increasing degrees to which the observed qualities may be found to be present. Scales ranging from 1 to 5 are usual, since more fine-grained distinctions are difficult for judges to apply with high levels of agreement. At the bottom level (level 1) of any rubric, the quality may be absent altogether or present only minimally. Statements describing level 2 may use terms such as "low" or, in the case of a body of work, "occasionally" to describe the degree to which the quality is present. The intermediate level (level 3) may use terms like "moderately," and the fourth level may contain descriptors such as "high" or "frequently" to describe the degree to which a quality is observed. At the upper level (level 5), the quality is present to the fullest degree possible.

When complex qualities such as "originality" or "creativity" are sought, several indicators may be clustered together in descriptors to guide the judgment of experts. For example, the rubric in table 7.1 is intended to describe evidence of creative thinking in portfolios.

**Table 7.1** Rubric for Creative Thinking

| *Achievement Level* | *Descriptors* |
|---|---|
| 1 | The portfolio shows the candidate worked only under direction with an unimaginative approach, showing little engagement with and empathy for the projects. No evidence of visual problem solving is present. The work is commonplace and entirely derivative with no evidence of ability to develop and express original ideas and feelings. |
| 2 | The portfolio shows the candidate worked mostly under direction with a fairly unimaginative approach, showing occasional engagement with and empathy for the projects. Little evidence of visual problem solving is present. The work contains few imaginative elements, is generally derivative with limited evidence of ability to develop and express original ideas and feelings. |
| 3 | The portfolio shows the candidate sometimes worked independently with only a moderate amount of direction. Some imaginative elements have been demonstrated in the approach to the work, and an acceptable level of engagement and empathy with the projects is shown. Moderate evidence of visual problem solving is present. The work is occasionally derivative but some evidence of ability to express ideas and feelings with imagination are demonstrated. |
| 4 | The portfolio shows the candidate worked largely independently. Many imaginative elements have been demonstrated in the approach to the work, and a high level of engagement and empathy with the projects is shown. Considerable evidence of visual problem solving is present. A high level of ability to express ideas and feelings with imagination is demonstrated. |
| 5 | The portfolio reveals a consistently independent and imaginative approach, with an outstanding level of empathy and engagement with the projects. An exceptional level of visual problem solving evidence is present. The work is extremely imaginative, demonstrating a highly unusual ability to express ideas and feelings with originality. |

*Source*: Adapted from the International Baccalaureate Review Draft of Studio Work Descriptors *[HL Part A & SL Option A] Criterion A Imaginative and Creative Thinking and Expression [IMAG]*. Geneva, Switzerland: International Baccalaureate Organisation. April 1996, p. 26.

Having constructed a rubric (or rubrics) to illustrate the qualities to be judged in a portfolio, it is reasonable to assume that (expert) judges can reliably score these qualities on a scale (typically 1 to 5). In so doing, a quantitative score for those qualities is expressed. Should

the judges disagree, then the scores are meaningless and consequently are not useful in research.

The reasons why judges may not agree are various. For example, the rubric may not be written clearly or in terms that are easily understood. Or the judges may have different backgrounds and different levels of experience. For example, experienced high school art teachers will be more likely to agree about the levels of creative thinking present in high school student portfolios than, say, experienced artists who have not taught high school students. This is because the teachers will have seen thousands of students' work and will understand the context, conditions, and constraints under which students of that age produce their work. Consequently, they will more readily be able to identify that which is unusual, creative, or imaginative for students of that age.

A researcher who wishes to use expert judges to score the qualities evident in portfolios should take care in the selection of those individuals. At the beginning of this chapter, the point was made that, for the purpose of artifact analysis, knowledge of context is essential. In other words the experts should know what they are looking at and be experienced both with the nature of the subjects under investigation and with the genre of the work to be viewed.

Secondly, the researcher must take care that the words used in any rubric to describe qualities clearly communicate what is meant. This is difficult to do because words are only symbols used to represent visceral qualities and are, in many ways, limited in their capacity to express the subtleties and nuances of visual expression. A common practice used to clarify the meaning of rubric statements is to select visual benchmark examples, which are work samples that exemplify the meaning of each level of the rubric. For the most effective results, it is advisable to have the selected expert judges discuss the rubric and agree upon best examples to use as benchmarks for each level. Having completed that task, the judges should work independently, using both the rubric and benchmarks to verify their decisions when scoring the work.

### *Types of Rubrics*

*Analytic rubrics*. There are two major categories of rubrics: *analytic* and *holistic*. Analytic rubrics are based on the assumption that the qualities observed in an artwork are mutually exclusive and can be separately assessed. For example, a researcher may be interested in

qualities such as technical skill, imagination, knowledge of elements and principles of design, and so forth. Rubrics for each of these qualities could be developed and separate scores for each quality generated through expert judgments. In some instances, the individual scores might be aggregated to create an overall holistic score (which is common practice in assessment contexts). Caution must be exercised if this procedure is followed, since questions of the relative value of each quality are raised. For example, are technical skills more or less important than imagination in a given context, or are they equally worthy?

Any teacher who has used analytic rubrics involving separate scoring of individual qualities, with the subsequent aggregate score representing the holistic judgment, will report their feeling of uneasiness when they find that the total score does not square with their holistic impression of the work. Most will admit going back into the rubrics to change individual scores in order to bring the aggregate into line with their holistic impression.

*Holistic rubrics.* It is due to recognition of this human trait in judgment, and the complexity of the relationship of the many qualities that make up the whole of a work of art, that a second type of rubric has been used to judge artworks. These are called holistic rubrics. This kind of rubric uses only one set of descriptors to generate a single, holistic score for the entire body of work. It assumes that the qualities of a work of art are interrelated and not mutually exclusive. This approach also assumes that a single set of criteria does not accommodate adequately all genres of artwork presented by students who have been encouraged to pursue independent interests. This scoring method also presumes that judgments of different students' work will require judges to pay different attention to the work in each case to accommodate differences arising from cultural context.

Even within a common cultural tradition, the qualities attended to in the process of judgment may demand different emphases according to the genre of the work. For example, contemporary work using new technologies and recycled imagery may raise different issues for judgment than work undertaken within traditional styles and using older media. It is important to avoid the imposition of specific cultural or artistic biases by the use of judgment criteria that are selected and weighted to reflect a particular view of art. This is the limitation of analytic rubrics. Holistic rubrics are far more flexible, allowing judges to pay attention to the qualities that matter most within specific works.

When judges use analytic rubrics, the process requires that each quality be assessed and reported independently. Holistic rubrics require that a single score be reported to reflect the presence and relationship of all qualities considered together. It is a much more complicated judgment. While this raises questions about the reliability of analytic versus holistic judgments of qualities, there is not a lot of research to support one or the other. However, some work in other disciplines, such as second-language speaking, found that problems of objectivity in assessing language speaking skills could not be improved with the use of detailed mark schemes, meaning that holistic judgments were just as reliable as analytic methods (Walker, 1983).

## Conclusions and Questions

This chapter provides an overview of the nature of portfolio artifacts, with particular reference to portfolios as a data source for the conduct of action research. Portfolio data offers a rich range of information for a researcher, provided that the full range of possibilities offered by portfolios are tapped. If students are encouraged to create portfolios that include work undertaken outside of class, that allow entries chosen by themselves rather than by the teacher, and that also allow for engagement in metacognitive reflection to analyze their thinking about ideas and processes, a multitude of research options are opened up.

The major benefits of portfolio data are that it offers evidence of learning over time. This evidence is manifested in multiple data forms including artworks, reflective notes, drawings, sketches, and the like. In addition, research shows that students are likely to produce more work as a consequence of the motivation provided by the feedback they receive from engaging in the portfolio process. The great value of portfolio data to researchers is that it is readily available and has validity; or, in other words, it is an authentic data source.

Because portfolio data is typically bulky, it is difficult to manage, collect, store, and analyze. Research utilizing three-dimensional work, in particular, has been largely neglected as a data source because of the sheer physical constraints its bulk affords. However, with the advent of electronic portfolios, new possibilities have opened up with respect to data management. These include efficiency of collection, storage, transport, analysis, and sorting. The nature of the teaching and learning experience is also changed and expanded in positive

ways if electronic portfolios are used instead of traditional hard-copy forms, again offering more options for research.

There is no doubt that electronic portfolios provide enormous benefits to students and teachers. Committed teacher/researchers are able to make the logistics possible to implement digital portfolios, even in elementary schools with minimal technology resources and very large numbers of students. Many of the advantages cited for digital portfolios, however, are simply the advantages of good portfolios, digital or not. Good digital portfolios will contain work collected over time. That work will be embedded in the curriculum content but will also be open-ended in its form. Students will include reflections about their work, and there will be an element of self-selection of data. The digital form of portfolios appears to make the collection of data more attractive, more interesting, and more likely. And this is a good thing. In addition, the digital portfolios themselves have the potential to become artworks in their own right.

Along with the benefits of electronic data management come some disadvantages, including loss of fidelity in the viewing experience for judges. Care must be taken to ensure that the benefits of using electronic records outweigh the known losses in visual qualities by employing measures to compensate for this outcome.

Portfolio data has the potential to provide rich insights whether analyzed using qualitative or quantitative methods. Mixed methods of analysis provide a more complete picture than the use of one or the other of these two options. If quantitative methods are chosen, it is important to use strategies to achieve interrater agreement in order to secure reliability in the judgment of qualities thought to be present in the work of research subjects. Reliability has been achieved when multiple judges are able to independently assign equivalent value to the same work, and content validity is achieved when the measures used to assess an artwork interrogate the essence of the subject matter. Both are essential to the achievement of meaningful research findings in both qualitative and quantitative studies.

Two types of rubrics (analytic and holistic) can be used to secure reliability of judgment. Analytic rubrics describe the various degrees to which a quality may be seen to be present in a portfolio. Analytic rubrics describe qualities separately, assuming they are mutually exclusive. Holistic rubrics describe qualities in synthesis, assuming they are not mutually exclusive, resulting in a single score to describe the value of a portfolio rather than multiple scores as is the case with analytic rubrics.

In the end, an action researcher will be driven to investigate research questions of significance to his or her professional life, and the choice of data, methods, and analysis will follow from the questions. Provided caution is exercised and attention is paid to the context, portfolio artifacts offer an enormous range of data options to satisfy the most complex of research questions.

## Key Terms

**Portfolio:** A collection of student work accumulated over time. This work is typically comprised of art pieces made by the student but can also include representations of work such as video or digital images, notes, and related materials collected for the purpose of illustrating the student's thinking about his or her work.

**Artifact:** An artifact is any visual, written, or recorded item placed in a student's portfolio that was chosen by them as representative of their work or as an illustration of their thinking about art making. Artifacts may be used by teachers or researchers as data for the purpose of evaluation and research. A collection of artifacts comprises a portfolio, and considered together these pieces may reveal more about student learning than each piece considered individually.

**Content Validity:** The extent to which assessment of learning in a content area addresses the essence of the social construct being examined. Any test instrument or judgment strategy used for assessment should be reviewed prior to use to determine its effectiveness in representing all facets of the construct.

**Reliability:** Reliability in art assessment is achieved when different judges attribute the same value to work of equivalent standard. Assessment rubrics used to assist examiners in their judgments can promote reliability if the rubrics are well designed and tested. Visual benchmarks used to illustrate rubrics can also assist examiners to achieve reliability in their judgments.

**Analytic Rubric:** An analytic rubric is designed to direct the attention of an examiner to the individual qualities of an artwork or portfolio. This kind of rubric assumes that the qualities viewed in an artwork can be regarded as mutually exclusive. An overall judgment is achieved by aggregating the scores produced from the judgment of the individual qualities.

**Holistic Rubric:** A holistic rubric considers an artwork or portfolio as a qualitative whole, resulting in a single score to represent its

overall value. The assumption underpinning this kind of rubric is that the qualities found in artworks are interactive and that separating them for the purpose of assessment does violence to the integrity of the whole.

## Activities

1. Design an analytic and a holistic rubric intended to assess student learning present in the same artwork.
   a. Discuss the strengths of both rubrics with respect to the information derived from the use of each.
   b. Discuss the shortcomings of both rubrics with respect to the information derived from the use of each.

2. List the kinds of research data that you could derive from portfolios to answer one or more of these research questions:
   a. What strategies do seventh grade students use to draw toys of their own choice?
   b. What factors influence student choice of subject matter for these drawings?
   c. What is the difference in quality between in-class and out-of-class drawings made by fifth grade students?

3. Design a research method that will ensure validity and reliability of judgments attributed to portfolio artifacts in a summative assessment context.

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# Chapter 8

# Quantitative Methods in Action Research

*Joan Flynn Fee*

## Introduction

As adults, our lives are filled with interesting problems to solve. Some are small—what to serve at a dinner party or what present to give a daughter on her fifth birthday. Others are larger and require more systematic investigation—what car to purchase with limited funds or where to live when moving to a new region. Some of our most perplexing problems face us at work—how to improve the morale of a work group or how to rev up eighth graders' excitement about algebra. All of these problems have something in common; at the end of reflection, investigation, and decision making, we take action.

Think about one of these problems: purchasing a new car with limited funds. Since funds are tight, you would want a dependable vehicle at reasonable cost. To address this problem, you might quiz friends and acquaintances about their satisfaction with their cars. You would probably look at ratings for cars, perhaps in a formal rating periodical. You might go online and investigate prices, possible rebates, gas mileage, and safety issues. To get a full picture, you would probably collect both stories and numerical information.

Many action research projects involve similar data-gathering processes. The researcher assembles numerical or quantitative data and verbal or qualitative information, analyzes that information, and determines a course of action. Other projects may rely on just one type of data, either quantitative or qualitative. This chapter discusses techniques for gathering and analyzing the types of numerical, or

quantitative, data that you might use in action research. The chapter focuses on four common methods of obtaining quantitative data: conducting surveys, making observations, administering assessments, and securing data previously collected by an organization.

## Using Quantitative Data in Action Research

Just as you face issues in your personal life where it is useful to gather numerical data, issues arise in the field of education where numbers aid in understanding an educational problem. For example, if you are a high school principal worried about parents' attitudes toward the school, it may help to conduct a survey of parents. Surveys that use multiple-choice questions or that request numerical information involve quantitative data analysis. Or you might be a teacher trying a new pedagogical technique. Analyzing test scores, a quantitative method, can offer evidence on how much difference your new teaching technique has made in student learning. Or perhaps you serve on a committee investigating the issue of bullying in your school district. When you examine school data regarding the number and types of behavioral problems, quantitative methods would aid your investigation. By understanding quantitative data methods, you sharpen your ability to make sound professional decisions.

## Selecting Methods and Tools

How do you know whether qualitative or quantitative methods might best help you conduct your research? The professional problem and topic that you want to address will help you choose your research method. Three sample action research topics (McAllister & Cutcher, 2011) to help you consider the quantitative-qualitative choice are (1) the impact of using a behavioral management system to decrease behavioral problems in a high school, (2) fourth grade math students' perceptions regarding computer-based homework, and (3) the effects of reading aloud to secondary students.

For each of the sample topics, the action researcher considered a local problem. For example, we might speculate that the preservice teacher who investigated topic 1, the impact of a behavioral management system, may have noticed a high incidence of behavioral issues at the high school where she student taught. The action researcher seemed to wonder how successful a behavioral management system

could be in resolving this problem. One way to study the impact of a behavioral management system would be to find a high school that had introduced such a system. The researcher could compare the number of behavioral incidents recorded in the year before the management system was in place to the number of incidents documented in the year after the system was launched. This behavioral topic meshes well with quantitative research methods.

In contrast, some research problems and topics suggest qualitative methods (e.g., interviews, focus groups, document analysis). Topic 2 (fourth grade math students' perceptions of computer-based homework) suggests interviewing the students, a qualitative research method.

Many research projects work best with a mixture of quantitative and qualitative methods. A researcher might investigate topic 3 (the effects of reading aloud to secondary students) by analyzing reading test scores before and after the reading-aloud project, a quantitative method, plus interviewing students to gather their reactions, a qualitative method. Since this chapter explores quantitative techniques, we will take topic 1, the impact of behavioral management systems, and use it to illustrate quantitative methods that could aid your action research projects.

## Other Considerations before Gathering Data

For topic 1, it appears that the action researcher has a hypothesis (a guess or supposition) that a behavioral management system may reduce students' behavioral problems. With quantitative research, we test hypotheses.

As a first step, we would define terms, such as "behavioral problem." This definition stage is important because as we spend time investigating behavioral problems—for example, counting them—we need to be consistent about what we consider a behavioral problem. Reading professional literature could help us define a behavioral problem; we could choose a definition offered by one of the experts in the field. Or, if our school handbook defines behavioral problems, we could instead choose to adopt that definition.

Just as your research problem and topic help you decide whether to conduct quantitative or qualitative research, your research questions will suggest your data collection techniques. Following are four sample research questions on the topic of behavioral problems

and behavioral management systems, linked to quantitative research techniques (conducting surveys, making observations, administering assessments, and seeking existing data). These illustrate the important connection of methods to research questions.

1. What is the proportion of students and faculty who think that behavioral problems are a serious issue at our high school?
2. What is the proportion of behavioral problems occurring in the cafeteria that are actually reported?
3. During faculty professional development sessions, was there a significant difference in how much the faculty learned about behavioral management systems when we used the pair-share pedagogical technique as compared to when we did not?
4. Was there a significant difference between the average number of behavioral incidents per student reported in the year before the school introduced a behavioral management system as compared to the number reported in the year after the management system was in place?

## Conducting Surveys

To answer the first research question, regarding student and faculty opinions about behavioral problems at the high school, we could conduct a survey. We would use a survey instrument, also called a *questionnaire*, to gather data on participants' attitudes. If our questionnaire asks open-ended questions, where the participants provide their own answers in words, the data would be qualitative. An example of an open-ended question would be, "Describe a behavioral incident you have witnessed at Central High School." When the questionnaire contains closed-ended questions, where participants choose an answer or where they record a number, the data are quantitative. Some questionnaires combine both types of questions. In this chapter, we consider quantitative questionnaires, which are helpful for gathering data when we need information from a large number of people.

**Finding or developing a questionnaire.** Before finding or developing a questionnaire, we need to consider the types of individuals who are appropriate for our survey, the sort of people who would have the answer to our research question(s). Those individuals would be our survey population. Our questionnaire needs to be understood by these individuals. We see from our first research question that we are interested in the opinions of both high school students and faculty; they constitute our survey population.

No matter who makes up our survey population, constructing a quantitative questionnaire can be a daunting task. In order to develop closed-ended questions, professional researchers usually begin by conducting in-depth qualitative research to discover the most common answers to questions. They consult a panel of experts on their topic to ensure they have properly addressed the subject matter with unbiased questions. They pretest a draft questionnaire with participants, getting their reactions regarding clarity and the order of the questions. Most action researchers do not have the time or resources for this type of questionnaire construction. So what can we do?

When we conduct our literature review, we may discover articles about research similar to our own. We will usually find contact information for the researchers, most often a university affiliation. Most researchers welcome an inquiry about their research and their questionnaire. We can e-mail the researchers, asking if we might have permission "to use and modify" the questionnaire. If the questionnaire matches our needs, we can adjust it to our situation, adding or eliminating questions. If we request a number of instruments, we may be able to combine questions from different questionnaires to cover our topic.

If you must draft your own questions for an action research project, it is worth taking the time to receive some guidance on the topic. Fink (2009) and Rea and Parker (2005) provide readable guides with strong sections on questionnaire construction. The Fowler (1995) guide is more academic in approach but deals entirely with questionnaire design and pretesting.

Survey questions consist of two parts: your directions to the participant and the question itself. For the question regarding whether behavioral problems were a serious issue at our high school, the directions could read, "Circle one number beside the answer that best represents your opinion." The question might be, "Take a moment to think about students' behavioral problems at Central High School. How serious an issue do you think behavioral problems are at our school?" The answer options could read, (1) extremely serious, (2) very serious, (3) moderately serious, (4) slightly serious, and (5) not at all serious. This type of question, with its range of responses, is called a *Likert scale* (1932).

Whether you develop your own questionnaire or you use or adapt an existing questionnaire, it is helpful to pretest it with a few people similar to your participants, but not those in your study. Sit with these pretesters as they complete the questionnaire. Note how long the

instrument takes them. Have them put a check mark by any questions that are unclear. When they have finished the questionnaire, discuss the questions that gave them trouble. Modify any questions that are not clear and conduct another pretest.

To return to research question 1 regarding behavioral problems, we would probably also want to know which participants were faculty and which were students. We would ask background (demographic) questions to obtain information about our participants' roles. Since those questions are easy to answer, we would ease the participants into the survey by beginning the questionnaire with demographic questions.

**Collecting survey data.** If our school is small, we might survey all of the students and faculty, a complete enumeration of our population; or, if the school is quite large, we might ask a sample of students and faculty to respond. Statisticians tell us that the sample is most likely to reflect accurately the views of the whole population when we draw a random sample. If we know that there are about 300 faculty members and 3,000 students at the school, we would need to decide how many people to include in our survey. The number of people we choose will determine how confident we can be that our sample accurately reflects the opinions of the whole group.

Consider the following: if we want to be 95 percent confident that our results will reflect the views of the whole population of teachers, within five percentage points, we would need to survey 169 of the 300 teachers. To be 95 percent confident within five points that the students' answers represent the opinions of the whole, we would need a sample of 341 of the 3,000 students. You might notice that when the population is smaller, we need a larger proportion of participants for an accurate sample. Sample size calculators, available on the Internet, can help you determine these numbers.

In terms of choosing our participants, we need a little over half of the teachers in our study. For a random sample, we could print out the teachers' names from the website and close our eyes and point to a teacher on our list. That is our first teacher. Since we need about half the group, we would choose every other name after that. When we got to the bottom of our list, we could go back to the first teacher we chose and work our way up to the top. When we have 150 teachers, we could close our eyes again and pick another teacher. We would keep trying until we landed on a name not yet in our sample. Then we could go down the list again, taking every other name until we had the next nineteen names.

For the high school students, selecting participants is a bit more complicated. For students under the age of eighteen, we need both the student's and a parent or guardian's permission for the student to participate. We could choose a class that all students attend, say homeroom. We could go to a guidance counselor and obtain a list of all homerooms. We could cut up the list and throw all the classes in a hat. If there were about thirty students in a class, and we need 341 students, we might draw twelve classes out of the hat and visit them, explaining our research and handing out parental/guardian permission forms. As much as possible, we would want all students to have an equal chance to fall into our study.

**Distributing a survey.** Our results will be most accurate if a high portion of our sample participates—if we obtain a large *response rate*. The response rate is the proportion of intended participants who actually take part in our survey. With a small response rate, we might include mostly people who are overly anxious to participate. They may not reflect the attitudes or characteristics of the average person.

Think of ways to boost the response rate. If our participants were all faculty members, for example, we might get permission to distribute our questionnaire at a faculty meeting, rather than into faculty mailboxes. We would have the participants place their completed questionnaires in a large collection envelope, to preserve the teachers' anonymity.

When our potential participants are adults and our survey involves little risk, we may choose to e-mail our survey. With e-mail, of course, we will limit participants to those with e-mail access. To preserve the participants' anonymity, there are a number of software programs where our participants can receive our e-mailed invitation to participate in the survey, but responses are collected on the program vendor's website so that we do not know who responded.

There are several software tools for creating online surveys; these programs simplify survey creation by providing templates to follow. SurveyMonkey, Zoomerang, and PollDaddy offer a basic survey edition free of charge. Please note that obtaining a high response rate is difficult with online surveys; we would want to e-mail participants at least three reminders. Resources are available with more detailed information regarding online surveys (Bethehem & Biffignandi, 2012; Dillman, Smyth, & Christian, 2009).

For future studies, if the technology is available to you, *clickers*, or audience response systems, provide another way of collecting data electronically when your participants are gathered in one place. For

most systems, you can pose questions on PowerPoint slides; the participants click the number that corresponds to their responses. To preserve anonymity, you could assign the clickers to random ID numbers rather than to participant names.

Clickers can also be useful if your action research involves gathering student opinions regarding a new learning technique or engaging in formative assessment. Should you be in a position to choose a clicker system, Barber and Njus (2007) review various systems, comparing the advantages and disadvantages of six different brands. Caldwell (2007) analyzes the educational research literature and summarizes best practices for using clickers as a teaching tool.

## Creating and Using Observation Instruments

To answer research question 2, an observation instrument, also called an *observation protocol*, can be ideal. Rather than relying on participants to report their behavior, you often get more accurate information by setting aside time to observe quietly what is happening. Regarding behavioral problems in the cafeteria, we would unobtrusively observe student behavior in the cafeteria over a period of time using an observation instrument. We could then compare the results of our observations to the behavioral data that the school had collected.

Like questionnaires, observation instruments can be *open-ended*, where you record in your own words what you see, producing qualitative data. Observation instruments can also be *closed-ended*, where you indicate a choice by writing or circling a number or checking a box under the appropriate answer. These closed-ended instruments create quantitative data. Another term for a closed-ended observation protocol where you rate someone is an *observation checklist*. Some instruments contain both open- and closed-ended questions.

Observation instruments can have simple aims—for example, noting how often a student arrives to class on time or how often the student has completed his homework. Observation instruments may also aid a more complicated observation. For example, the Reformed Teaching Observation Protocol (RTOP), developed at Arizona State University, is a more complex instrument, combining both open- and closed-ended questions. RTOP's developers suggest that the protocol offers "a standardized means for detecting the degree to which K–20 classroom instruction in mathematics or science is reformed per the

national science and mathematics standards" (Reformed Teaching Observation Protocol, 2007, paragraph 1).

As with questionnaires, your review of the research literature can make you aware of well-tested observation protocols that you might wish to request. For permission to use the instrument, e-mail the researcher, asking if you could both use and adapt the protocol.

To return to research question 2 regarding student behavior in the cafeteria, if we do not find a tested observation protocol that fits our needs, we could design our own form and test it for clarity and ease of use. Table 8.1 illustrates part of a protocol that researchers/observers could use. If multiple researchers/observers are using protocols, it is important that the instruments be pretested to achieve observer consistency. This consistency between observers' judgments is termed *inter-rater reliability*. Several observers might conduct their observations intermittently over the period of a semester. We could compare the number of behavioral incidents that the observers recorded each day to

**Table 8.1** Sample Closed-ended Cafeteria Observation Form

| | |
|---|---|
| Cafeteria Observation Form | |
| Observer_____ | Date_____ |
| Observation Beginning Time _____ | Observation Ending Time _____ |
| For each behavioral incident, record the time that the incident occurred, the number of students involved, and the type of incident. | |
| Incident 1 | Type of Incident |
| Time_____ | Verbal insults |
| Number of Students | Threats |
| Involved_____ | Pushing, shoving, grabbing, slapping |
| | Kicking, biting, hitting with a fist |
| | Threats with a weapon |
| | Using a weapon |
| | Theft |
| | Other _____ |
| Incident 2 | Type of Incident |
| Time_____ | Verbal insults |
| Number of Students | Threats |
| Involved_____ | Pushing, shoving, grabbing, slapping |
| | Kicking, biting, hitting with a fist |
| | Threats with a weapon |
| | Using a weapon |
| | Theft |
| | Other _____ |

the school's daily records of reported behavioral incidents to determine their degree of consistency. Responding to closed-ended questions provides a means for multiple observers to rate the same actions.

## Using Assessment Data to Conduct an Experiment

The third research question concerns whether there was a significant difference in how much two groups of faculty learned about behavioral management systems during professional development sessions when the instructor used different pedagogical techniques with each. Exploring the effectiveness of a pedagogical technique is a common action research focus. A researcher compares the pre- and posttest results of students who experienced the new technique (the treatment group) to the results for similar students taught in the traditional mode (the control group).

For research with the high school faculty, if we invite a *random* group of teachers to each of our two training sessions, the research method would be called *experimental*. If we train established groups of faculty—for example, with the teachers on the first floor of the high school in the treatment group, and the teachers on the second floor in the control group—then our method would be *quasi-experimental*. At the beginning of the professional development session, the instructor would pretest both the treatment and the control groups of teachers on their knowledge of the workshop content. For the treatment group, the instructor would use pair-sharing as an instructional method. During the workshop, teachers would respond to the instructor's questions by sharing their answers with a partner before discussing them as a group. With the control group, the instructor would simply ask for volunteers to answer his questions. At the end of the session, both the treatment and control groups would take a posttest. When analyzing the data, we would check to see whether the treatment group and the control group showed significant differences from each other in the amount their assessment scores changed from the pretest to the posttest.

## Using Extant Data to Compare Groups

Often your school or district has already collected appropriate data for your action research project, termed existing or *extant data*. For

example, perhaps a few years back your principal attended a workshop on professional learning communities (PLCs) (DuFour & Eaker, 1998), and she instituted PLCs in your school two years ago. As a member of the school improvement committee, you suggest comparing the average standardized test scores that the students received in the year before the school instituted PLCs to the average scores they received in the current year. The school already has the test data; you would simply need to analyze it. (See the "Research Ethics" section of this chapter for a discussion on ethically handling test data.)

As another example, many schools today collect discipline data that report students' names, identification numbers, grade level, gender, ethnicity, behavioral incidents, and punishment received for incidents, such as detentions, suspensions, or expulsions. The fourth research question considers whether there was a significant difference between the average number of behavioral problems per student reported in the year before the school introduced a behavioral management system as compared to those reported the year after the management system was in place. To answer this question, we would turn to the discipline data the school has already collected each year. We could simply get a count of the average number of incidents per student for each year, comparing the two years. The *Freedom of Information Act* (FOIA), which became law in 1966, has made information collected by governmental agencies more accessible to the public.

Using FOIA, a graduate student requested the following data from the Illinois Board of Education for use in her dissertation (Chambers, 2010). These data are typical of the types of extant data available from school districts: district name; district number; superintendent name; superintendent salary; county; region; district type (high school, elementary, unit); district student enrollment; district size category; average teacher salary in district; average administrator salary in district; district per-pupil expenditure; district equalized assessed valuation (from Illinois School District report card); superintendent gender; superintendent ethnicity; superintendent level of education; and superintendent years of experience. In order to receive the gender and ethnicity data, the student had to make a FOIA request; and when that request was denied, she appealed to the state's attorney general and received the additional data. Depending on your research interest, you do not always need to collect data yourself; there is much extant data available.

In sum, while we discussed two different kinds of extant data that schools collect, standardized test data and discipline data, educational

organizations collect many other types of data. As noted in the dissertation example, state boards of education are additional sources of information. Through the Freedom of Information Act, you can request information from different levels of educational organizations. As you plan your action research project, just remember to allow enough time to request and receive the extant data.

## Analyzing Quantitative Data and Reporting Findings

**Survey data.** In action research, much of your quantitative data analysis of surveys will be *descriptive*. Often you will be describing the proportions of people who had different opinions. For some types of data, say test scores, you might also be reporting means (averages) and standard deviations, a measure that shows how dispersed the scores are from the mean.

If you gather your data electronically, the software generally allows you to see the proportion of people who gave different answers. If you use paper-and-pencil instruments to collect your data, you will need to enter the information into a data-analysis software program such as Microsoft Excel or IBM SPSS. If you enter your data into Excel with the names of the variables at the top of the columns, with the data under it, you can import it from Excel into SPSS. Variables are categories of data that have different values, for example, student ID, type of behavioral problem, or gender.

For simple percentages, you can report your results in the text. For example, recall that our first research question concerned student and faculty opinions on the seriousness of behavioral problems at Central High. We might report results as follows:

> Of the 510 faculty and students surveyed, 51 percent think that student behavioral problems at Central High are either a very serious or extremely serious issue. The remaining 49 percent find the behavioral-problem issue to be moderately serious, slightly serious, or not at all serious.

If we wanted to report the faculty and student opinions separately, we would consult our Excel help facility on how to display a pivot table, or SPSS help on how to display crosstabs. Both Excel and SPSS also allow us to display table data in a bar graph. Figure 8.1 displays

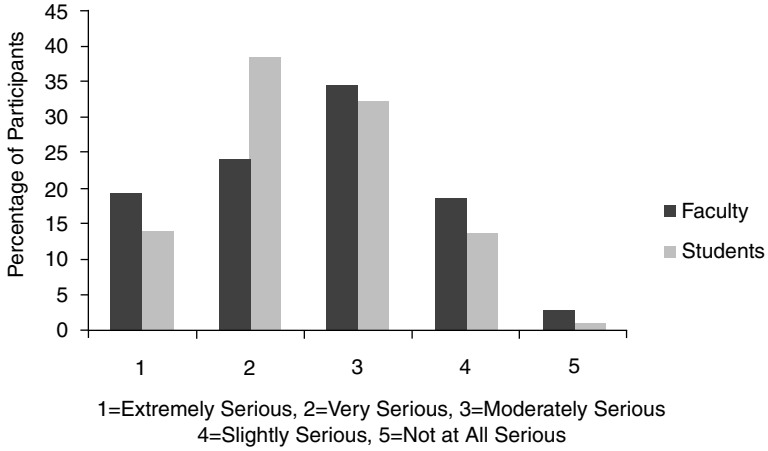


**Figure 8.1** Opinions of Central High Faculty and Students on Whether Student Behavioral Problems Are a Serious Issue, author created, used with permission of author

faculty and student opinions separately in a bar graph created in Excel. This graph offers us a visual presentation of faculty and student opinions. Besides inserting the graph into the body of our report, we would also comment on the graph. Our description for figure 8.1 could be as follows:

> Figure 8.1 separately illustrates the opinions of Central High faculty and students regarding the seriousness of the behavioral-problem issue at the high school. Participants rated the seriousness of the issue on a five-point scale, ranging from extremely serious to not at all serious. Among faculty, the most common opinion was that the behavioral-problem issue is moderately serious; among students, the largest proportion of participants consider the issue very serious.

**Observational data.** Our second research question concerned the proportion of behavioral issues in the cafeteria that actually appeared in the school's discipline reports. In terms of our data analysis, we could analyze the data from the observation form similarly to the way we would analyze survey data. From the form, we might use Excel or SPSS to report simple counts of the numbers of students involved in behavioral problems, the proportions of problems that fell into the different categories, or the mean number of incidents that happen in a day over time. Once we computed the mean of

behavioral incidents that cafeteria observers detected in an average day, we could compare that number with the number that appeared in the school's records.

**Data from experiments and extant data.** For both the experimental and quasi-experimental data, we would use the same statistic, the *t-test*. We use the t-test to discover if there are statistically significant differences in two mean scores. For the experiment, we are interested in knowing whether the faculty members who experienced the pair-share teaching method during their professional development workshop learned more than the faculty members who experienced traditional teaching methods (research question 3). We could subtract each faculty member's pretest score from the member's posttest score to discover how much the faculty member had improved. Then we could use the t-test to determine if there is a statistically significant difference between the average improvement of the pair-share treatment group and the average improvement of the group taught with traditional methods.

In the education field, generally we consider differences statistically significant if the odds indicate that there is only a 5 percent chance, or less, that the differences between groups were a fluke. In other words, for statistically significant differences, there is a 5 percent or less probability that the differences we found in our sample happened by chance rather than actually reflecting what occurs in the population we are studying. The t-test determines that probability for us. The easiest way to determine these odds (statistical significance) is to use a statistical program such as SPSS or a spreadsheet program such as Excel. Using SPSS is a bit simpler; with Excel we would need to enter the formula for computing the t-test.

Our fourth research question involved using the school's extant behavioral data to compare the average number of behavioral incidents per child in the year before the school instituted the behavioral management system versus the current average number of behavioral incidents per child. Again, we would use the t-test statistic to see if the difference between the two averages was statistically significant. If we find a statistically significant difference, we have evidence that the number of behavioral incidents changed when the school added the behavioral management system and that the change is not a fluke.

Our evidence would not prove that the behavioral management system caused the change. We would need to gather additional evidence to make a strong case that the behavioral management system

was the main source for the decrease in behavioral problems. Our additional evidence might consist of qualitative interviews with teachers and students to determine what impact the behavioral management system had on them.

## Research Ethics

Before designing your action research study, you need to give some thought to research ethics. Most universities and some school districts and research organizations have an institutional review board (IRB) whose job it is to protect the rights of participants in research projects. These boards use rules from the federal government to guide them.

Since children are a vulnerable population, IRBs ensure that the researcher will ask for a parent or guardian's permission for a child to participate in a formal research study and will also ask the children themselves if they want to participate in the project. Parents/guardians and children have the right to change their minds about the research and to drop out at any time without penalty.

As a researcher, you must keep the names of any participants confidential. You also would need to explain to participants the activities involved in the research, the time commitment, and the location where you will conduct your research. If your participants will be adults (age eighteen or older), many of the rules are the same. However, at the time of the writing of this chapter, the federal government is considering allowing the distribution of surveys to adults (those eighteen and older), in cases where the participants remain anonymous, without IRB approval (U.S. Department of Health and Human Services, 2011). Consult your local IRB for its rules of submission.

There are several situations where you do not need to seek parental permission. One is if you are observing children engaged in their usual activities and where they are not readily identifiable, for example, out on the playground. (If you videotape children or adults, you need permission.) Another situation is if you have access to standardized test results. If all identifying information has been removed from the test results, you do not need to ask parental permission to analyze them. You also do not need parental permission to experiment with a new instructional technique. Finally, if you are engaging in action research solely to improve your own practice, it would not be considered formal research, and you would not need research board approval.

Whatever your purpose, you would want to follow ethical guidelines.

1. Make people at the site where you are gathering data aware of your research. In the case of a school, that would be your principal and your colleagues.
2. Be respectful of those participating in your research, always maintaining their confidentiality.
3. If you are using video or audio equipment to record your participants, seek their permission, and their parents' permission if the participants are children.
4. Reflect on the bias you may bring to the study, asking questions that are as agenda free as possible, and being open to results you may not anticipate.
5. Report your findings fully and honestly.

## Conclusions

Having knowledge about quantitative methods strengthens your skills and your ability to investigate the complicated issues that you face in your workplace. In the field of education, more and more emphasis is being placed on evidence-based and data-based decision making. Gathering data through conducting surveys, making observations, assessing students, and locating extant data can provide you with rich sources of evidence with which to make sound professional decisions and take action.

## Key Terms

**Assent:** Children's agreement to participate in research once they have parental (or guardian) permission and they understand what you are asking of them.

**Clickers:** An audience response system that permits immediate electronic collection of data from participants in one location.

**Experimental research:** Research that involves a control group and a treatment group, with random assignment of participants to the two groups.

**Extant data:** Data already collected by an organization.

**Hypothesis:** A guess or supposition about what might explain a problem or an observation.

**Informed consent:** Agreement by adults to participate in research after they understand the procedures and the risks.

**Institutional review board:** A committee charged with reviewing and approving research that involves human participants in order to protect their rights.

**Parent/guardian permission form:** A form that a parent or guardian completes giving permission for a child under the age of eighteen to participate in a research project.

**Population:** The entire group of individuals who fit the characteristics of people you wish to include in your research.

**Quantitative research:** Research that perceives reality as objective and collects numeric data, analyzed through statistics.

**Quasi-experimental research:** Research that involves a control group and a treatment group without random assignment of participants to the groups.

**Research problem:** The real-world issue that underlies the need for your systematic investigation.

**Response rate:** In survey research, the proportion of your intended research participants who complete your questionnaire.

**Sample:** The segment of the population that you wish to include in your research.

## Activities

1. You are an action researcher investigating fourth grade math students' perceptions regarding computer-based homework. Construct three survey questions for a student questionnaire that uses Likert scales. Try to avoid bias by making the questions as neutral as possible.
2. You are a consultant interested in studying the issue of violence in schools. Draft a letter to your local district superintendent using the *Freedom of Information Act* to request the school violence data for the district's two high schools.
3. You are considering an action research project that studies "the effects of reading aloud to high school students." Which quantitative method is likely to produce the soundest evidence: survey research, observation research, or an experiment? Write a one-page description of your project that justifies your choice of method.
4. You are part of a committee at your middle school that will be surveying the faculty about school culture. The committee is worried about how to achieve a high response rate among busy teachers. Write a one-page memo to the chairperson on the best way to administer the survey and how to boost the teachers' response rate.

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# Chapter 9

# Program Evaluation Research

*Jerald (Jay) Thomas*

## Introduction

According to the Joint Committee on Standards for Educational Evaluation (2011), program evaluation as a method of research is a means of systematically evaluating an object or educational program. As straightforward and succinct as that definition is, you will find that evaluation research borrows heavily from other methods of research. Evaluation research has at its root the assumption that the value, quality, and effectiveness of an educational program can be appraised through a variety of data sources. As educators, we find ourselves making evaluations daily, and in a variety of contexts. The evaluations we make according to Fitzpatrick, Sanders, and Worthen (2011) fall along a continuum between formal evaluation and informal evaluation.

When we make judgments about how today's lesson went, or how the faculty responded to a curriculum change, or how this year's football team looks based on newspaper reports, we are making *informal evaluations*. Informal evaluations tend to be subjective and perhaps a less systematic means of gathering and analyzing data from a variety of sources that may lead us to making informed decisions.

*Formal evaluations*, however, allow us to bring multiple perspectives and data sources to an evaluation and lead us to more informed decisions and deeper understandings. As educators, it is likely that we will not have ample time or resources to invest in systematic evaluation of the myriad of issues contained in our practices. However, a formal evaluation can allow us to take a deeper look at, for example,

the science curriculum and determine its merit or worth. In keeping with the definition of formal evaluation, program evaluators are typically interested in more systematic evaluations concerning the efficacy of a single program in a particular setting. While program evaluation shares a number of important characteristics with other research methodologies (e.g., defining the problem, collecting and analyzing data, and reporting findings), this chapter will examine the distinguishing characteristics of program evaluation that make it an appropriate method for action research.

## What Is Program Evaluation?

What is a program, and what does it mean to evaluate it? In answering these questions, we can begin to understand distinctions between the applied research approach of program evaluation and other research methods. Several definitions of program evaluation are applicable here:

> Program evaluation is the determination of the objectives of the program in measurable ways and the assessment of whether the objectives were reached. (McNeil, Newman, & Steinhauser, 2005, p. 13)

> [W]e define evaluation as the identification, clarification, and application of defensible criteria to determine an evaluation object's value (worth or merit) in relation to those criteria. (Fitzpatrick, Sanders, & Worthen, 2011, p. 7)

The terms "measurable ways," "assessment," "defensible criteria," and "systematic investigation" suggest that program evaluation strives for precision, strong evidence, and justifiable and quantifiable methods and conclusions, for example, data from surveys or interviews, curricula, and other program-related documents. On the other hand, terms like "merit," "worth," and "value" imply that a program evaluator may make more of an independent assessment through a qualitative analysis of data about whether a program is doing what it claims to be doing, and whether it is of sufficient value in its current design. So, if you decide that a program evaluation is appropriate as your approach to research, it is important to consider whether you intend to determine how well, for example, a new reading program would work in a setting similar to your research site, or whether that reading program is effectively meeting the needs of the students in your grade level.

But what is a *program*? While the action research methods proposed in this text will most likely be conducted in an educational

setting, the principles and practices guiding program evaluation can and do extend to programs in a variety of contexts, such as businesses, government agencies, and park districts, as well as K–12 schools. As such, the broad definition of "program" determined by the Joint Committee on Standards for Educational Evaluation (2011) guides this chapter.

Such a definition opens up an array of potential areas for inquiry in the form of evaluation across disciplines and professional roles: a new reading program, an induction program for new teachers, a problem-based learning course for honors students, the implementation of a positive behavior program in middle school, or a program intended to address bullying in late elementary grades. As such, program evaluation is an appropriate and legitimate method of research in educational settings for a variety of reasons. McNeil, Newman, and Steinhauser (2005) suggest that program evaluation should be recognized as "applied research" (p. 19). In keeping with this analysis, program evaluation is very appropriate for action research because of the focus on determining the efficacy of local, classroom, or school-level programs and making modifications and improvements to educational practice.

## Considerations in Program Evaluation

It is very likely that if you are reading this book, you are a graduate student in the field of education or a practitioner who is considering several possibilities for research that will inform your practice. As with any research, topics most often originate from a teacher-researcher's professional roles or interests. A teacher in a gifted program, for example, might reasonably research the efficacy of an enrichment science program, or an athletic director might be concerned with the quality of his athletic training program.

There are several considerations for undertaking a program evaluation as action research: (1) identifying a program and determining the scope, (2) understanding the stakeholders, (3) determining the research/evaluation questions, (4) identifying data sources, (5) analyzing data, and (6) reporting the findings and recommendations.

**Identifying a program and determining project scope.** As an action researcher, you should probably identify a program that you are familiar with and that you have an interest in understanding more deeply through a formal evaluation. Your interest in a program will engage you more fully and sustain your attention throughout the evaluation

process. Perhaps most importantly, your familiarity with a program can give you important insights into such considerations as where to identify sources of data or evidence, which critical questions to ask about the process, and who the stakeholders are.

With a program in mind for your action research, it is important to frame your program evaluation as either a *formative* or *summative* evaluation. A formative evaluation is one in which the evaluation process is conducted while the program is in place and is being implemented. The purpose of a formative evaluation is to examine a program in such a way that the program can be reviewed, modified, and refined in the future. In contrast, a summative evaluation differs from formative evaluations in that it often arises from a concern outside the school. For example, a school board might ask the principal to evaluate a co-teaching model that the school is trying out this school year. This type of evaluation may be conducted at the end of the program for the purposes of determining whether to retain, dismiss, or significantly modify a program. Or, as another example, community leaders may have an interest in determining whether an after-school program is having an effect on local gang behavior. A useful distinction between formative and summative evaluation comes from Robert Stake: "When the cook tastes the soup, that's formative evaluation; when the guest tastes it, that's summative evaluation" (Scriven, 1991, p. 19).

If you are a classroom teacher, it may be practical to conduct a formative evaluation of a program that you are involved with, such as a blended online/face-to-face science instruction program or an incentive program to encourage at-home reading. If you are a school administrator, however, you might evaluate a program that has schoolwide implications, such as a decision to implement block scheduling. Both of these evaluations would result in decision making and modifications that may be implemented in the following year.

**Understanding stakeholders.** As in all educational research, including action research, researchers begin with topics and questions that will enhance understanding about how students learn and how teaching practices and programs might be improved. Most research has a particular audience in mind. For example, research journals typically report studies and findings that, if significant, may have broad impact in educational practice. Even action research, as we have seen, is intended to inform practice in our own classrooms. Evaluation research, however, responds to the interests of various persons and groups—stakeholders in the evaluation process. *Stakeholders* in a program evaluation are those persons, groups, or organizations who

have an interest or "stake" in the success or efficacy of the program you are evaluating. Greene (2005) suggests that stakeholders fall into four categories: (1) those who have authority over a program, (2) those who have a defined accountability in a program; (3) those who receive a benefit from a program; and (4) those who may be disadvantaged by the program. Program evaluations have implications for multiple stakeholders. These individuals might, in an educational program evaluation, include principals, teachers, students, or parents. The four categories are a useful way of identifying stakeholders in an evaluation that you might undertake at the classroom or school/institutional level.

Using these four categories of stakeholders, let's examine an example program that you might choose to evaluate in your own school. Let's assume the following: You have been asked to conduct an evaluation of your district's gifted and talented program. In assessing the efficacy of this program, you may soon realize that it is not only the students in the gifted program who are of concern in the overall evaluation. Who are the other stakeholders? The following set of questions can guide you in determining stakeholders:

- Who has authority in the gifted program? The school board that proposed the program? The district or school system's gifted education coordinator? The school principal who may have varied levels of authority?
- Who has accountability or responsibility in the program? An obvious source of accountability for the gifted program would be the teachers who design and deliver the curriculum in the program. What about the school psychologist who administers the standardized tests required for admission to the program? Or the teachers who provide observations and recommendations for students to be admitted? Or other school personnel (a committee of educators and other individuals) who oversee admission? While most of these stakeholders (except for the teachers) may not directly interact with the classroom, all have an indirect influence on and accountability toward the composition of the program.
- Who receives the benefits of the program? Most obviously, the students in the program benefit from the enriched environment. Parents also benefit in knowing that their children's intellectual needs are being met. It might also be the case that the gifted program attempts to create learning opportunities that are piloted before being used more widely in the school. It might be the case, then, that the program provides benefits to the school as a whole.
- Finally, who might be disadvantaged by a gifted program? Gifted education can be a source of political debate among educators or school

> boards, and very often the debate revolves around the very question of disadvantage. Why, for example, are certain students (the gifted students) the beneficiaries of special programs, experiences, and opportunities when the majority of students in the school are not? Gifted programs are often also underrepresented with certain economic and ethnic groups. Does such a disparity exist, and what needs to be explored and reported with respect to this disadvantage?

The identification of stakeholders has important implications for the program evaluation. It determines what persons and groups may or may not be directly involved with the program evaluation. Therefore, the reporting of your findings should acknowledge the stakeholders and take into account who participated, and to what extent.

Some examples of individuals who may not directly be involved in the program include parent groups, school board members, or funders for summer programs for the gifted. On a practical level, identifying stakeholders early on is useful in planning for additional essential steps in the evaluation process: (1) framing the evaluation questions; (2) identifying potential sources of data (both existing data and data that may need to be collected); and (3) determining methods for collecting data, such as through focus groups or interview data.

**Framing the program evaluation questions.** Research is generally directed by a question or a set of closely related questions. With my students, I encourage them to think of formulating their research questions as posing and exploring relationships between two or more variables. For example, they might consider the effect of a summer mathematics program on student achievement in mathematics. To answer such a question, they might identify two groups of students matched for math ability. Research can be conducted by comparing the performance on a standardized math exam of the group of students who were enrolled in the summer program with that of those who were not. In this case, we would have two groups of students, one intervention or independent variable (the math course), and one dependent variable or source of data with which to compare the two groups (performance on the math test).

Such a study could offer some insight into the efficacy of the summer math program. The results might be very generalizable, but the findings are also limited to what we can claim about the effect of the summer math program on a group of students. The evaluation research, however, offers a broader perspective on the efficacy of the program by virtue of the sources of data that might contribute to the evaluation.

Although program evaluations do not pose formal research questions with clearly articulated relationships between variables as you would find in a quantitative study, the evaluation should nevertheless be directed by questions that will identify areas of interest or focus for the evaluation. Articulating questions to guide or direct the evaluation will ensure that the evaluation does not simply become an aimless review of reams of data that ends in a descriptive overview of the program. Furthermore, unlike research questions that are formulated by the researcher based on a review of existing literature, the evaluator must often take into account questions that are of broader interest to the identified stakeholders (school administrators, parents, school board members, community leaders, etc.).

The questions guiding a program evaluation should concern areas of interest for you as the researcher, your school, and/or the program's stakeholders. As an example, at our university, we have implemented an ongoing cycle of academic program reviews; an external expert identifies three or four academic majors each year for program evaluation. The program evaluations are guided by a standardized set of questions that are developed by university faculty and academic deans and are used across all university program evaluations. These questions are aligned with program outcomes for students and the university's mission and vision.

The process begins with the faculty members and an external reviewer reviewing the existing evaluation questions and posing any additional program-specific questions. Some of these questions include the following:

> How does the program (in this case, the major) provide teaching and learning experiences that are consistent with university and program goals, standards, and objectives?
>
> How does the program provide evidence of alignment with the college's strategic planning in the following areas?
>
> - *Faculty quality* (for example, teaching effectiveness, training in their content area, community and institutional service, and scholarly activity)
> - *Stude*nt quality (for example, preparedness for coursework, grades, student research, certification, and performance on state-mandated assessments)
> - Program *quality* (for example, curriculum, assessment, and graduation requirements)
>
> How does this program compare on similar dimensions to comparable, local colleges and universities?

> What appears to be the demand for the university's graduates, and, similarly, are there patterns in student demand for the program?

Admittedly, the university program evaluation process is probably larger in scope than what you will conduct in your action research, but the questions used to direct the evaluations provide some important considerations and clear examples in framing research questions for program evaluation.

Upon analysis of these questions, the first question (and this is likely important to many education-based evaluations) asks whether what we are doing is consistent with the university mission and aims. In other words, is the program doing what the school claims that its programs do? Secondly, the questions suggest that the evaluation is multifaceted and that it will consider a number of different dimensions and various perspectives to evaluate and illuminate a program's components. Finally, the evaluation questions can provide an evaluator with a starting point for determining what might be some appropriate sources of data with which to conduct the evaluation.

As the program evaluator, you bring a particular expertise and perspective to the evaluation process; you may be aware of questions to ask that others may not ask. Therefore, the evaluation question-forming process should involve conversations between you as the evaluator and key stakeholders. For example, your principal may have an interest in faculty perceptions of a new block schedule, while teachers in the building may have concerns about its effects on student achievement. Considering the concerns of various stakeholders can result in a set of questions that are appropriate and relevant for specific contexts.

**Identifying data sources.** The strength of your evaluation will in many ways turn on the richness of the data that you use to answer your evaluation questions. But, as we often find in educational program evaluation, although we rely heavily on evidence and data from our practice to inform teaching, compiling a meaningful body of resources for an evaluation can be difficult. The following reasons capture why data may be difficult to gather: (1) it may reside in many locations throughout the school or district; (2) it may not be systematically gathered or organized; (3) it may consist of confidential records that require permission to access; or (4) it may simply not exist in any form, which necessitates an intentional attempt to capture evidence by other means, such as creating a survey instrument or convening a focus group. For example, in an evaluation of a college major, we often receive requests from the evaluator to review course evaluations

so that he or she can get a sense of students' experiences in a particular course. While most faculty are willing to share their course evaluations with the outside evaluator, some are not. Therefore, you cannot expect that all sources of potential data, no matter how valuable they might be to your evaluation, will be accessible to a program evaluator.

For practical reasons, Sanders (2000) suggests that whenever possible, program evaluators should attempt to use as much extant (already existing) data as possible. Program evaluations should have a defined beginning and ending point, whether they are conducted by external experts or by action research students. In the case of action research, it is quite likely that the evaluation timeline will be defined by an academic semester or year. With this in mind, it is important that you identify your data sources early on and determine whether you will need to rely on any sources that do not already exist. For example, will you need to conduct interviews with anyone?

As suggested by Sanders (2000), look first to those preexisting sources of data and evidence that have already been gathered at your evaluation site, many of which are likely to surface in your day-to-day work, such as the following: (1) official school documents (school mission, vision, and goal statements; school improvement plans, policy manuals, student handbooks, and budget records; student records, grade records, discipline reports, dropout records, and extracurricular involvement); (2) student assessments (classroom assessments and standardized test results); (3) interviews, surveys, or focus groups with participants and stakeholders (students, teachers, parents, and administrators); (4) classroom materials (syllabi, course descriptions, classroom resources, such as lab equipment, books and classroom observations).

If the program that you choose to evaluate has been in place for a number of years, it is likely that the program has been evaluated before. As you begin to identify sources of data, it would be worthwhile to ask the school leadership whether the program has been evaluated before. If so, reading the previous evaluation report can provide possible directions, questions, and sources of data for your current evaluation. For example, if the evaluation report recommended that a new course be added to the science curriculum, questions might reasonably address whether the course had been added since the last evaluation, and how effective the course is.

As you review possible data sources in the list above, you may realize quickly that the data you need for your evaluation reside in multiple departments or offices in your school or district. If, for example, you

were conducting an evaluation of an antibullying program, it would be easy enough to capture such documents as the school policy on bullying or the classroom policies for dealing with episodes of bullying. It might be more difficult, however, to capture and summarize the school's record of bullying episodes—the number of reported offenses, the nature of the offenses, and the consequences of the offenses—depending on how systematically your school records such incidents. You may also find that if you are looking at bullying districtwide, records may be maintained differently from school to school.

Locating and compiling relevant data can be the most time-consuming task of the program evaluation process. At my university, where we conduct several academic program evaluations every year, we ask that programs actively monitor and maintain records of the data they use during the year. For example, if a program conducts follow-up interviews with graduates, the program maintains in a data matrix the type of assessment (alumni survey), the type of instrument (paper-and-pencil survey), when the survey is administered, and who manages the data.

For your evaluation research, you may not find that such records are systematically maintained. Beginning your data collection by auditing the data that are available as well as the types of data you may need to generate (for example, interviews or focus groups) will expedite the planning. Remember that your evaluation is directed by several evaluation questions, so the data that you will need should address all of your guiding research questions.

Table 9.1 was created for the evaluation of a teacher certification program. You can see that the program evaluation has several areas of focus that are noted in the "Focus" column: student satisfaction with the experience, student knowledge and skills in their field, quality of the university faculty teaching in the program, and so forth. For each area of focus, there are identified sources of evidence, and in several areas, there are multiple data points. Areas of focus are also aligned with artifacts/instruments and a timeline for collecting data. If you are conducting your own program evaluation, you may find it useful to adapt this matrix, or create your own, as a way to organize and align your research questions or areas of focus with your potential data sources in the initial stages of the evaluation process. This will allow you to assess what you have, and what data you still need.

**Analyzing data.** Throughout this book, you can read about multiple techniques for gathering and analyzing data for the purposes

**Table 9.1** Matrix of Data Gathered for Teacher Certification Program Evaluation, Author Created, Used with Permission

| *Focus* | *Evidence(s)* | *Artifacts—Instrument(s)* | *Time Line* | *Report to* |
|---|---|---|---|---|
| Student satisfaction with program: | Mean satisfaction rating in content areas and competence in state standards | Student Exit Survey | December/ May | Assessment Officer |
| Student satisfaction with courses | Mean satisfaction rating at program and course level for each major survey section | Student Survey Instrument | End of semester | Individual Instructors |
| Field experience evaluations | Ratings from cooperating teachers and clinical supervisors | Student Teacher Observation Tool | October | Field Experience Coordinator |
| Pre-admission knowledge and skills | Profile of applicant and incoming certification cohorts | 1) Letters of reference<br>2) State Basic Skills Test<br>3) State Content Area Test for secondary candidates Skills<br>4) Admission essay<br>5) GPA of 2.75 on 4.0 scale | Pre-admissions | Admissions Office |
| Student content knowledge and skills | Mastery of content relative to intended teaching | 1) Professor evaluations and grade<br>2) Student Portfolio | Ongoing | Field Experience Coordinator |
| Faculty demographics | Faculty roster (full-time and adjunct) | Faculty applications and CV | Ongoing | Program Chair |
| Faculty quality | Degrees, rank, and experience | Faculty appointments and CV | Ongoing | Program Chair |
| Service to community | Committee assignment | Annual performance review | June | Dean of the College |

of understanding and drawing conclusions through action research. Evaluation research will no doubt borrow various data-gathering and data analysis methodologies. In some cases, mixed methods may be used. Questions relative to how you should analyze data, such as whether you should use a one-sample t-test or an independent-sample t-test when comparing girls' and boys' test scores, should be guided by the evaluation questions that frame your study and the type of data you will be using.

It is through the interpretation of data and the *triangulation* of data that conclusions and recommendations are formed. Triangulation of data refers to the deliberate task of looking across data sources to find corroboration of observations. For example, you interview several teachers from the gifted program in your school, and independent of one another they suggest that they have seen a decline in students' writing abilities over the past several years. You certainly would want to note this, and it is quite possible that there has been a decline in writing skills, but you probably would not want to recommend in your evaluation report that the school implement some sort of writing remediation based simply on the interviews. The strength of evaluation research is that you have access to multiple data sources to support your conclusions. In this case, you might also want to examine student performance on a standardized verbal or written test for the past year. Or you could request samples of student assessments over the past two years to determine whether the teachers' claims might be corroborated through several other data sources.

**Reporting the findings.** Whether you are conducting a formative or summative evaluation, the purpose of the evaluation is to inform practice. In some cases, a program evaluation may lead to the discontinuation of a program. Other evaluations may lead to changes in funding, reorganization of staff, or expanding the program.

Admittedly, it is not feasible for you to look at every piece of data related to the program, but your report should be thorough and clear. Although there is no universal template for a program evaluation report, an effective report should include the following: (1) an overview and statement of the purpose of the study; (2) an articulation of the questions that directed the study; (3) a presentation of the data that were reviewed for the evaluation and the methods used to analyze the data (demonstrate ways in which you triangulated data to corroborate your observations and findings); (4) a summary of the findings, observations, and trends discerned in the data, which can be composed as responses to the evaluation questions; and, perhaps

most importantly, (5) a clearly stated set of recommendations for the program.

This final point is particularly important for several reasons. When we design and conduct a research study, whether it is at the classroom level, school level, or in some cases the state or national level, we are concerned with whether our findings will be consistent with findings from similar studies and the degree to which the findings can be generalized. At the end of a research report, you will typically find a section called "Implications for Education," which will suggest ways in which the study improves our understanding of teaching and learning (or a program), and what implications it has for other practitioners. In evaluation research, the implications section is more properly understood as recommendations for stakeholders. Taking into account the needs and expectations of the stakeholder groups, it is the program evaluator who makes an informed set of recommendations with respect to the program under evaluation.

As you finalize the evaluation report, there are a few considerations that can both enhance the accessibility of the report and improve the likelihood that the report will indeed lead to changes in a program. First, remember that the report will be read by several audiences, most of whom will be in the field of education, but others who may not be. Therefore, try to communicate your report in language that is not specialized, jargon filled, or highly technical. Second, prior to disseminating the final report, it would be useful to have an interested party review and comment on the report, both for its content and organization as well as for matters of grammar, syntax, and spelling, which can enhance the credibility of the report.

Findings from program evaluations are typically shared and disseminated to stakeholders in a very timely manner so that decisions about and changes to the program can be made expeditiously. Unlike a research report published in a peer-reviewed journal, which is typically read by individuals with specialized interests, evaluation reports are intended for multiple audiences. The first level of readership includes the primary stakeholders who are in positions to make decisions about the program. For example, if you are evaluating a gifted program in an elementary school, and the principal is the school official who makes the decision about whether to maintain or modify a program, it is likely that the principal would be the primary audience. It is important to note that the audiences for your report may not include all the stakeholders. In the example of the gifted program, some of the stakeholders may receive a report; but elementary students

participating in the program would not constitute an audience for the evaluation report.

It is also important to note that not everything may be selected for inclusion in the final report. For example, if during a focus group you find one student who feels particularly negative about the program, while the rest of the group seems very pleased with the program, would you note that in your report? You may choose not to do so. It is not that you are trying to suppress a negative finding, but as an evaluator, you may choose to dig a little deeper and determine whether the negative attitude is more widely held among students, or you may determine that the negative student is anomalous and not necessarily reflective of a more generalized concern.

In the final analysis, the sine qua non of your evaluation report lies in your recommendations for the program. Your recommendations must be credible, reasonable, and of course clearly anchored in the data you compiled and reviewed. It is possible that you will conclude your report with six to eight recommendations. It is also unlikely that the school or program can effectively respond to all of the recommendations in a timely manner, if at all. Therefore, it would be helpful to prioritize and rank the recommendations from most to least important. Whenever I conduct or coordinate a program review, I frame the recommendations with this question: "If I were to return to your school a year from now, what are the two recommendations I would most like to see addressed by the time I return?"

Perhaps most importantly, succinctness and brevity are important in conveying your observations and recommendations. A short report that clearly leads to recommendations will be more likely to be read carefully. If, however, you find yourself needing to write a lengthier report, you should consider drafting a one- to two-page executive summary of the report including all of your recommendations for general readership.

## Practical and Ethical Considerations in Evaluation Research

Any educational research undertaken, including action research, must be committed to protecting the subjects involved in the study. Even studies that seem rather benign in their design and execution—for example, administering a pre- and posttest to assess student performance after a problem-based learning unit—are bound by the same

ethical considerations as a study that involves the administration of psychological tests.

Professional organizations such as the American Educational Research Association (AERA) and the American Psychological Association (APA) publish guidelines for ethical conduct for research. It is recommended that you review "Ethical Standards of the American Educational Research Association" (AERA, 2011). Other ethical considerations that govern program evaluations are outlined by Sanders (2000), who offers practical advice: keep confidential records protected under lock and key, protect participants from harassment and embarrassment, do not identify participants by name without permission, and do not subject participants to physical or psychological risk or harm.

Sanders' (2000) recommendations are characteristic of the more formally articulated "Propriety Standards" found in the "Program Evaluation Standards" compiled by the Joint Committee of Standards for Educational Evaluation (2011). The propriety standards

> reflect the fact that evaluations affect many people in a variety of ways.... These standards require that individuals conducting evaluation learn about and obey laws concerning such matters as privacy, freedom of information, and the protection of human subjects. They charge those who conduct evaluations to respect the rights of others. (p. 6)

Generally, you will find stakeholders interested and eager to talk with you and to provide documentation to inform your evaluation. But, as with other types of research in which subjects must be allowed to opt out of the study without any penalty, the evaluator cannot coerce, for example, students to take part in a focus group as part of an evaluation of a music program. Similarly, as important as written documents can be to an evaluation, you cannot always expect to have full compliance in receiving evaluation materials. In a number of evaluations that I have conducted, for example, I typically request copies of student course evaluations. In most instances, faculty will gladly submit their evaluations, as these are invaluable in understanding how students perceive their classroom experience. To protect the teachers, I always provide a statement to them that all names will be removed, that individual course sections will not be identified, and that their signature states agreement to use the individual course evaluations. Even with such assurances, some faculty will decline permission to release their course evaluations for the purposes of a program evaluation.

You should be mindful that the program evaluation might also involve tensions and disagreements among the stakeholders. In the example of the evaluation of a gifted program, you may find that there are differing perspectives between the school board and parents of the gifted students. As such, in many program evaluations, the evaluator should include (by interviewing or surveying) the perspectives of several important stakeholders. Such differences of perspective should be acknowledged in your evaluation report and addressed in your recommendations. For example, in a recent evaluation in which I was involved, certain members of a high school faculty felt that they effectively addressed ethical issues in their classrooms, while students felt that ethics was an overlooked part of their high school curriculum. From my perspective as the evaluator, it was my feeling that the teachers did, in fact, talk about ethical concerns (for example, the question of capital punishment as it was explored in several English courses). My report to the school community suggested that I felt that ethics had been considered in a variety of ways, but that the faculty had not intentionally introduced it. Therefore, I recommended that the teachers more deliberately use the word "ethics" in their syllabi and in their planning for daily lessons.

Finally, a thorough and thoughtful program evaluation requires, as you will find, a significant investment of time and effort. Your own time in organizing the evaluation, the participation of interviewees and focus groups, tracking down and organizing multiple data sources, and finally composing the report and disseminating the findings can often take a full year of a researcher/evaluator's time. Often, however, even the most thorough program evaluations fail to lead to a change in practice or a modification of a program. This can be due to the fact that the evaluation report does not effectively reach multiple audiences. Therefore, as you formulate your evaluation plan, it is useful to identify persons involved with or overseeing the evaluation and to recommend to these individuals that your evaluation report be distributed to necessary stakeholders and audiences when you conclude your evaluation.

## Putting It All Together

Program evaluation as a form of action research might best be captured as "applied research." It is distinguished from other forms of research presented in this chapter in several ways: (1) it is intended to assess the value, worth, or efficacy of a program rather than to examine the relationship between two or more variables, or to better

understand classroom-based problems; (2) it is directed by questions that reflect the concerns and interests of various stakeholders rather than addressing the questions of an individual teacher-researcher about his or her classroom; (3) it allows for the inclusion and interpretation of multiple sources of data that can be triangulated to corroborate observations; and (4) it concludes with a series of recommendations for modification of a program rather than broad implications for educational practice, or specific implications for classroom practice.

The following are some key questions that can guide the development of program evaluation as action research and that should be considered at the beginning and throughout the process:

- What is the program I wish to evaluate?
- Who are the stakeholders?
- What are my research questions, and how do they reflect the stakeholders' concerns?
- What data do I have access to? What data will I need? What methods will I use (e.g., interviews, focus groups, surveys, extant data)?
- What trends do I see in the data? Is there evidence from multiple sources?
- What are my recommendations? How should I prioritize my recommendations?
- Do the recommendations respond to the evaluation questions?
- Have I shared preliminary recommendations with stakeholders?
- Who are the audiences for my final evaluation report? Parents? Teachers? The school board?
- How will I disseminate the report and to whom?

Practical considerations for conducting a program review that is completed during a graduate-level course in action research should be manageable in its scope and timeline. In your role as a student, you will likely want to engage in an evaluation that can be completed within the limits of the course requirements. From a practical standpoint, too, you will also want to be mindful that it is most efficient to conduct an evaluation that can be completed during a time when your data can most easily be accessed, for example, when school is in session rather than over the summer.

## Key Terms

**Formative evaluation:** A formative evaluation is one in which the evaluation process is conducted while the program is in place and is being implemented. The purpose of a formative evaluation is to examine a

program in such a way that the program can be reviewed, modified, and refined in the future.

**Program evaluation:** A systematic evaluation of an object or educational program. A program evaluation uses multiple sources of data and evidence to assess the effectiveness and value of a program to multiple stakeholders.

**Summative evaluation:** A summative evaluation is typically conducted at the end of the program for purposes of determining whether to retain, dismiss, or significantly modify a program.

## Activities

1. **Designing and Conducting an Evaluation**

The purpose of this activity is to give you an opportunity to design a mock program evaluation plan (and, in fact, it might even allow you to begin to develop your own action research evaluation study). As you have read through this chapter, have you considered possible programs at your school or in your district that might be ripe for an evaluation? Have you thought about possible sources of data that might inform your evaluation? This activity would be appropriate for a group, in which each participant identifies a topic, and the small group is able to provide insight and critique the process as the evaluation is refined.

a. Brainstorm several possible programs of interest. Individually or in groups, respond to the following questions: Do these programs reasonably meet the criteria for the definition of a "program" presented earlier in the chapter? Which one of the programs is of particular interest to you, and why?
b. Select one program that seems best suited to your interests. Review the definitions of formative and summative evaluations. Individually or in groups, respond to the following questions: How could this program benefit from a formative evaluation? How could this program benefit from a summative evaluation? Which kind of evaluation are you inclined to pursue at this time, and why?
c. Before you begin to think about sources of data for your evaluation, think about who your stakeholders are in this evaluation. Very often, colleagues or persons in different roles understand a relationship that is not obvious to the evaluation. Individually or as a group, respond to the following questions: Who are the potential stakeholders? Parents? Teachers in the school? The local community? Others? How important is it that you consider these individuals as a potential source of data? What are the stakeholders' relationships to the program being evaluated?

d. Now that you have identified the stakeholders in your evaluation, you can begin to pose the questions that will direct your evaluation. Individually or in a group, respond to the following questions: How does the program meet the stated learning objectives? How does the program align with the stated mission and vision of the school? How does the program align with professional standards (e.g., for the National Science Teachers Association)? What are other questions you could ask?
e. Think about the types of data you imagine you will need to conduct a thorough evaluation. It is helpful here to begin by identifying extant data (i.e., data that you know already exist, such as test scores, school report card data, course syllabi). Individually or in groups, respond to the following questions:

    - What data are needed to address questions listed in d?
    - Where do such data reside?
    - Who is responsible for managing this data? For example, if you know that your school conducts postgraduation surveys, who in the school manages the data?
    - What data will you need to collect by other means, such as interviews or surveys?
    - What procedures will you need to follow to ensure ethical data collection practices?
    - What practical considerations should you be aware of in data collection?

f. Now you have possible data sources. You may find that not all of them will inform your evaluation, so identify those that are most important. Individually or in groups, respond to the following questions:

    - How will you analyze the data?
    - Are the data quantitative in nature? If so, what will be the proper data analyses? Will you use any software?
    - Are the data qualitative?
    - What techniques would be most appropriate to identify trends and themes in the data?
    - Will you use any software?

g. Finally, you have concluded your evaluation report and you are prepared to share it. Individually or in groups, respond to the following questions:

    - Who will see the report?
    - Should you prepare both a written report and an oral presentation? For example, will a written report go to the principal and an oral report to the teachers in your grade level?

- Where or with which groups or persons do you expect your report to have the most influence?
- Will you prepare a different oral report for each audience?

2. **An Ethical Dilemma for Program Evaluators**

Imagine that you have been invited by a school board and have agreed to conduct an evaluation of a program for gifted elementary school students. You were invited because you are recognized as an expert in your state in the area of gifted education. You find that the stakeholders (parents, administrators, students, teachers) are divided on the issue of retaining a gifted program that has been successful with students and popular among parents of the gifted children. Individually or in groups, respond to the following questions:

a. As an expert and an advocate of gifted education, how can you approach the evaluation objectively? How can you put your biases aside and evaluate the dissenting opinions without taking a side?
b. How would you address the divisive issue if you found that the principal (who supports the program) is in disagreement with a school board that opposes it?
c. How would you respond if a key stakeholder pulled you aside after a focus group and told you that a negative report would cause dissension within the school's faculty?

3. **Gathering Data**

This exercise asks you to reflect upon the program evaluation process and think about how you might respond to a program evaluation. Think about a current or past program in which you play or played an active role. This may include, for example, a program at school, in your community, or in a parent organization. Your program is being evaluated for formative purposes, and an external evaluator will be conducting the evaluation. In answering the following questions, you may better understand the perspectives and needs of the program evaluator and the roles and responsibilities of program participants. Individually or in groups, respond to the following questions:

a. What types of data could provide the evaluator with an understanding of your program?
b. What types of data do you anticipate the evaluator might request?
c. What types of data do you anticipate might be difficult to access? How will you access the data? What data might require a formal request?
d. What types of data do you believe you are not currently gathering that might be useful as you plan for the evaluation?
e. What questions do you have about gathering data?

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# Chapter 10

# Critique, Advocacy, and Dissemination: I've Got the Data and the Findings, Now What?

*Karen Keifer-Boyd*

## Introduction

While any of the action methods overviewed so far can be considered appropriate for conducting advocacy research, the whole is greater than the sum of its parts. Action research as social justice research becomes advocacy when the project extends beyond data collection and analysis to answer research questions that also change the current status of conditions impacting teaching, learning, and working. Here, ethics are of the utmost importance, and reciprocity between researcher and participants is emphasized through dialogically based research methods to avoid exploitation. This chapter addresses strategies and avenues for using action research as a path for change and advocacy, drawing upon Augusto Boal's participatory theater strategies for difficult dialogues, in that a focus on ethics involves mutually educative dialogue, reciprocal reflexivity, and intersubjectivity (Alexander & Mohanty, 2010; Boal, 1985, 1992; Brouwer, Mulder, Nigten, & Martz, 2005; Butler, 2005; Dill & Zambrana, 2009; Fischer, 2010; Lykes & Coquillon, 2006).

## Making an Impact with Action Research

Social justice is a goal where all individuals support one another for everybody's well-being in economical, social, environmental, and

educational areas. Social justice is a participatory democratic process. It is historically specific and embodied, in that what is fair and equal is not a definitive measure but is based on principles of equitable participation by all people in making decisions about stewardship and access to resources such as water, food, shelter, health care, education, and economic and social capital.

*Critical action research* toward social justice advocacy emphasizes a "commitment to social transformation, challenging power relations, showing solidarity, recognizing and using emotions, being the change you want to see, and building spaces for critical dialogue" (Chatterton, Fuller, & Routledge, 2007, p. 222). Pathways for action research as advocacy for social justice involves attention to inequitable power relations, building spaces for transcultural dialogue designed to question values and structures experienced in our daily life, critical reflection from intertextual and intersubjective investigations, and is often collaborative in the pursuit of collective knowledge production for systemic change. Making visible inequitable power relations, dialogue, reflection, and collective production is key to changing perspectives (Reed, 2011).

Social justice research as advocacy is "politically committed research" in response to local and global injustices (Chatterton, Fuller, & Routledge, 2007, p. 217). It is conducted in a continuous spiral that involves framing critical questions, collecting relevant data, planning and taking specific actions that confront social inequalities and seek transformative social change toward global ecological visions of peace and well-being for all, "reflecting on the impact of the action," and "sharing results" (Schoen, 2007, p. 211). Reflection as reciprocal reflexivity involves seeing a situation from multiple social justice positionalities, revealing differential power relations, and disclosing who benefits from the research.

The research itself is a conscious effort to change conditions. Action research is a form of intervention into the public pedagogy of objects, signs, ideas, and practices of our everyday world. Gender construction and identification is public pedagogy in that we wear and perform gender (Butler, 2004). Gender is central to "the shaping of our consciousness, skills and institutions as well as in the distribution of power and privilege" (Lather, 1991, p. 71). The journal *Visual Culture & Gender*, founded in 2005, publishes work from those who explore and challenge patriarchy through public action as well as those whose interventions in knowledge production offer insights into issues of visual culture and gender that might ordinarily remain outside our experiences. One such example of social justice research as advocacy published in *Visual*

*Culture & Gender* is Joni Boyd Acuff's (2011) study of an after-school program for those who self-identify as lesbian, gay, bisexual, transgendered, or queer (LGBTQ) teens. She conducted a study of her teaching art for social justice in an exploration of the ways art making can be transformative. The art "activities in which the participants engaged not only increased their knowledge about social justice, but also ignited critical self-reflection and analysis of their world" (p. 49). She also discusses her own personal and professional transformation from her experience as an ally in the LGBTQ space. Her action research strategies as advocacy with the youth involved mutually educative dialogue, reciprocal reflexivity, and intersubjectivity.

## Gathering and Interpreting Data

Data for social justice action research may comprise embodied, visual, and performative actions. Chick and Hassel (2009) argue that "it is critical to explore the ways that technology can not only accommodate feminist teaching strategies but may be in other ways more compatible with some of the student-centered, collaborative, democratized, and action-oriented approaches that are characteristic of feminist teaching" (paragraph 1). *Second Life* is a pedagogical virtual space accessed through technology of the Internet that can be used for social justice action research to explore and challenge assumptions about the body, subjectivity, reality, new media, collaboration, and interaction. Below are examples of types of data that can be recorded in reflective blogs, real-time chat logs, and virtual world avatar performances.

In an exploration of self and society with critical avatar creation, undergraduate students preparing to be K–12 teachers in my course on visual culture and educational technologies critically reflect on the body as political and on identity representation, as well as the visual culture of the virtual world. Students learn how to change their avatars and write reflective blog entries to include photos of their avatar in selected settings and constructed appearance. This project asks students these questions: Is our body as political as it is physical? Is the physical form a political form? What is an avatar? An amplified or hollowed body? Organic body matter, silicon base, or alloy? Voluntary, involuntary, controlled, programmed, or all four working in concert? In what ways is political agency performed in the avatar that you created? If we watch ourselves act through our avatar (i.e., we can watch our avatar's movements and expressions), how far is

our avatar's acting outside of self? What are the limits of representation in the *Second Life* avatar application? The following excerpts are from two young women students' blogs of their intersubjective awareness of their physical and virtual self:

> My avatar is a reflection of who I am. Although he doesn't look like me, I have captured my own persona within him. I refer to him in third person because I feel like he is a reflection of me until I use the "mouseview" to look through his eyes. In these pictures he is displaying some of the qualities of myself: fun, energetic, creative, and calm. (September 18, 2011)

> After watching my avatar perform various actions, movements, I was also convinced that I was acting through my avatar, like a marionette that I am controlling. (September 19, 2011)

The creation and performance of avatars in virtual environments can stretch open the borders of comfortably incorporated frames of knowing self and reality. Students learned potentials of the virtual world as a place for discussion, and they were able to discern differences between facilitating dialogue in physical meeting and virtual meeting spaces. Most students find that the chat discussion removes some of the obstacles found in face-to-face discussion, such as having too little time for all to speak, too little time to reflect prior to contributing before the topic changes, or being too self-conscious to speak out. Those who have found their voice privileged in physical encounters are often initially resistant to the dialogue in virtual text-based approaches. This awareness of changes in dynamics of privilege and power in dialogue is intersubjective knowledge important for becoming teachers.

## Embodied Sculpted Analysis

The Theater of the Oppressed Laboratory (TOPLAB), founded in 1990 by educators in New York and Boston, have worked closely with Augusto Boal (1931–2009), who established the Theatre of the Oppressed in the early 1970s to foster

> democratic and cooperative forms of interaction among participants. Theater is emphasized not as a spectacle but rather as a language [i.e., verbal and/or nonverbal body image] designed to foster critical thinking: 1) analyzing and discussing problems of oppression and power;

> and 2) exploring group solutions to these problems. This language is accessible to all.... Oppression is defined, in part, as a power dynamic based on monologue rather than dialogue. (Picher, n.d., para 1; see also Picher, 2007)

Using Boal's (1992, 1985) strategies for group participation in interpreting data, I experimented with *sculpting embodied analyses*. This process involves *spect-actors* performing and directing each other to form body poses (individually or in groups, in motion or stationary statues) from their interpretation of data constellations. In body sculptures of survey data in response to the question, "What is the image of a feminist in the field of art education today?" Image Theatre techniques can help the researcher experience and understand different interpretations of the data. Sculpted embodied analysis opens possibilities of discomfort, risk, and emotional response, which occur in transformative learning. In facilitation of discussion of sculpted embodied analysis, the participants in the discussion exposed the socialization process itself in supporting oppressive practices. A premise is that individual transformation incites and mobilizes action toward societal change.

This particular research project concerning feminist art education has gained momentum through the process of public enactments of mutually educative dialogue such as during the National Art Education Association (NAEA)'s Women's Caucus Lobby activist spaces.[1] Beyond the NAEA's annual convention sessions, meetings, and events that reside within the formal protocol of the NAEA, the NAEA Women's Caucus Lobby event literally takes place in a hotel lobby as a visible site of a gathering each year since 2008, and is off the radar of the NAEA's programming and conference catalogue sanctioning. The NAEA Women's Caucus Lobby gatherings are organized through social media and serve as an informal democratic forum for personal as well as political discussion and action.

> By capturing and articulating the specific manifestations of patriarchy and their effects on women and men, feminists have been able to tease out not only the intersections and more obvious oppressive patriarchal norms, but also the very habits underpinning these as part of our unconscious selves. (Fischer, 2010, pp. 75–76)

The lobby dialogue has been audio recorded and transcribed each year since 2008. It is shared with all participants prior to publication

on the NAEA Women's Caucus website and other places. Permission to publish each person's statement as part of the record of the lobby dialogue includes asking, "If you wish to have your statement included and be anonymous please indicate this. Please feel free to revise what you said to convey what you intended and send that revision to me. Also, if you would like to add to it, please do that." Some lobby participants revise and add; others ask to be anonymous. All requests are honored, and the transcript is not published until each individual has responded to the permission request. The dialogic process continues with a call to NAEA Women's Caucus members using social media, asking, "What do you believe is critical to lobby for in 2012?" Responses from members posted on FaceBook or e-mailed to me form the prompt for dialogue at the next lobby session.

## Ethical and Practical Considerations in Advocacy and Dissemination of the Research

There are numerous and complex ethical and practical considerations regarding the inclusion and exclusion of the participants involved in action research. To what extent have those who will be impacted by the action of the research(ers) been involved in articulating the need, developing a plan, carrying out its implementation, and reflecting on the action? How is the self-reflexivity and interpretation of participant data presented and disseminated, and to whom and for what goals? "Reflective solidarity refers to a mutual expectation of a responsible orientation to relationship" (Jodi Dean, quoted in Weir, 2008, p. 128). Participatory action research involves a "commitment to holding together – not through suppression of critique, nor enforcement of stasis, but through engagement, commitment to working through, together" (Weir, 2008, p. 128).

Other considerations with respect to data collection and dissemination when engaging in social justice action research include decisions about inclusivity of perspectives of those who are the focus of the research, and the level and type of involvement in the research at all stages, including presentation of findings. Michal Krumer-Nevo (2009), director of the Israeli Center for Qualitative Research of People and Societies, discusses the complexity of such decisions in her participatory action research (PAR) as social justice advocacy to reduce poverty in Israel, particularly as it impacts women. Decisions

involved "defining or the creating of a community of participants" (p. 284), and defining a "thematic concern," which in this PAR of forty women was to influence the welfare, housing, and education social services. The participants planned the PAR and decided they needed to extend the research to involve policy participants and social activists "to make their experiences, opinions, and recommendations heard by high ranking professionals and policy-makers" (p. 286). Based on the transcripts of their discussions, they wrote and presented position papers at a conference. Krumer-Nevo (2009) describes the impact of the position papers, which were widely distributed.

> They were published in an academic journal in Hebrew and in a popular magazine (*A Different Place, Eretz Acheret*), and have been used by social change organizations, by social workers and by educators to improve social practice with people in poverty. They also serve as teaching materials for academic purposes, as a documentation of the life knowledge of people in poverty in the Israeli context. (p. 289)

Krumer-Nevo (2009), as a university-based researcher, recognizes that "giving voice" to marginalized groups should be more than using their personal stories as anecdotes for the researcher's purpose but rather should be included in decisions throughout the research process and validated as knowledge by contextualizing and politicizing participants' voices (p. 289).

## Action Research for Social Change: Strategic Examples

The following examples are different than the examples earlier in this chapter by individual researchers in that these sites of occupation bring together large groups to strategically position themselves together to bring forth change. Social change begins with individuals' visions of what needs to be changed and is informed by participatory processes in which the particular form of that change is developed in the process of bringing many people together. For example, *The Ribbon: A Celebration of Life* (Philbin, 1985) called for peace through sewn segments of fabric, symbolic of unbearable loss in nuclear war, that were wrapped around the Pentagon. The NAMES Project AIDS Memorial Quilt is another example familiar to many because it is an ongoing, visible, large-scale effort in public places since 1987. By 1996, it covered the entire National Mall in Washington, D.C., and included 82,000

names and more than 6,000 three-by-six-foot memorial panels commemorating the lives of those who had died of AIDS. This captured the attention of syndicated news media (Reed, 2011). A small group of people can begin action research, make it visible, and open the process for others to contribute to its visibility and grow the network of advocacy, which will capture the news media and effect political agendas that impact health, environment, education, and other areas that need attention for equity and well-being for all.

Criticality toward social, economic, and environmental injustice becomes advocacy and activism for social justice by responsibly listening to voices of the marginalized and oppressed; by revealing power structures that control people, cultural narratives, and hegemonic worldviews; by stopping harmful, inequitable, and discriminatory practices; and by envisioning eco-utopian well-being alternatives.[2] "An emancipatory, critical social science develops out of the social relations of the research process itself, out of the enactment of research praxis that uses intellectual effort to work toward a more just society" (Lather, 2004, p. 208).

For example, Gender Research in Africa into Information Communication Technologies for Empowerment (GRACE) is a research network of fourteen research teams in twelve countries,[3] of about thirty women and men, that formed in 2004 in response to a call to African academics and activists by the International Development Research Centre and Association for Progressive Communications. The GRACE Network is committed to equality and social justice. At their first meeting in Johannesburg in 2004, they prepared a collective agenda of research about African women's sense of agency and empowerment with information communication technologies (ICTs). In 2005, Ineke Buskens facilitated workshops on qualitative research for the GRACE Network using strategies similar to Boal's Image Theatre techniques to develop self-reflection practices premised on the belief that "the act of self-reflection in itself brings about change" (Buskens & Webb, 2009, p. 15). Buskens also taught methodologies she had developed such as the transformational attitude interview technique, the depth interview technique, outcome mapping, and the free attitude interview. Their in-depth research reports are at the GRACE website[4] and synthesized in the seventeen chapters of the book *African Women & ICTs: Investigating Technology, Gender and Empowerment* (Buskins & Webb, 2009).[5] The book's overarching purpose is to derail ICTs from reinforcing, unintentionally or otherwise, women's discrimination and disempowerment, and to define

empowerment through ICTs from the research participants' perspectives (Keifer-Boyd, 2011).

## Pedagogy as Social Justice Action Research

A conversational performative text is a form of cultural critique in that more than one perspective is included, often as counterpoints, and readers are invited to participate in the dialogue (Eisenhauer, 2010). I briefly introduce my Transcultural Dialogue project as an example of a process for a postcolonial feminist critique that maps "the nuances of hegemony and resistance in visual texts that are embedded in larger systems of representation" (Parameswaran, 2008, p. 418). In the first iteration of the Transcultural Dialogue project, Ugandan graduate art students selected websites that each saw as representing the visual culture of the United States, while the U.S. undergraduate and graduate art education students selected websites that they believed represented the visual culture of Uganda. We looked at what was bookmarked to represent each group's country, read the rationales for the selected representations, and responded whether, how, and to what extent these representations related to individuals' lives. Participants created visual artworks using the dialogue as the content for the artworks, responded to questions about their subjective relationship to the images, and articulated what knowledge is needed to understand the artworks. Naples (2003) posits that "a reflective dialogic process can offer a context in which conflicts in interpretation are revealed and, more importantly, renegotiated in a more egalitarian fashion than is found in traditional social science methodology or in other approaches to activist research" (p. 201).

In asking the ontological question, "what is real?" the theory in this participatory action research is that reality transforms in the sharing and in the exchanges with others different from oneself. In the third iteration of Transcultural Dialogues, I, along with my colleague in Uganda, invited our students to bring metaphors, beliefs, experiences, and familiar sayings or folklore to the group as content from which to question assumptions of the neutrality of knowledge. The prompts for the dialogue generate transformative learning as evident in this student response:

> I am obviously not very good at taking someone else's perspective. It seems that my interpretation of someone else's ideas and beliefs reveals

> more about my own beliefs than theirs. Even in my effort not to stereotype I have never-the-less done exactly that. My history and experiences have influenced my opinions of others and my ignorance has become clear. Thank you for sharing those details about your family; it makes [me] reconsider completely my previous response. (October 2011)

When discourse is the content of collaborative artworks by those generating the discourse, how would they see their subjectivity in the artwork they produced in negotiation with each other in the art-making process and its signification? From an in-depth look at the collaboratively created artworks from the Transcultural Dialogues, and the discourse surrounding it, I analyzed the voice-recorded interpretations for particular discourses of gender, nation, race, creed, or class as visible and auditory reflections of participants' change in perceptions of self and those of a culture very different from their own (Keifer-Boyd, 2012). To conduct the analysis, I read the transcriptions of interpretations many times, coding and sorting codes, and I closely examined the artwork. From this process, I noticed that the women participants in both countries refer to the clothesline as symbolic of communication and of topics that were absent or avoided in the dialogue. I shared my analysis with participants, which generated dialogue about socially taboo topics.

In another action research as advocacy for sustaining an art program at a school in Helsinki, Finland, during classroom observations, I noticed how students as young as ten years old freely entered the art supply storage closet to get materials and tools and then returned them at the end of the class period. Without specific instruction, students sought something particular, or something that would work with their developing idea. I was particularly impressed with the safe and surface-protecting use of glue guns by the young students. The art teacher pointed out later that they occasionally burned themselves but soon learned how not to burn themselves and to handle the hot glue gun with respect. They also took care in their working environment and did not want glue blobs where they would need a flat table upon which to paint and draw. Independence and responsibility were some of the art-making practices I observed.

The art teacher noted that maybe she should have more structure, but could not since students had independent ways to work. Some needed to work over and over again with an idea and material until satisfied with their work. Others needed to continue to develop their ideas with different processes. The art teacher also expressed her concern that one of the drawbacks of working with computers in art is

that everyone would need to go to the computer lab at the same time. From my observation and our discussion, I suggested that a laptop with wireless connection to the Internet should be sought out as a medium or tool in the same way that students selected and set up a glue gun when needed. I made an association or *translation* between glue gun and computer. From an actor-network theory (ANT) perspective, the glue gun was an actor or point of translation in a network of associations made by me to understand the need and envision a solution. ANT has helped me to see more in considering that human and nonhuman actors equally form or assemble a network of meanings and actions (Latour, 2005). Lather (1991) described face validity as "operationalized by recycling description, emerging analysis, and conclusions back through at least a sub sample of respondents" (p. 67). In doing so with the art teacher, my analysis was translated into a grant that the art teacher received to obtain the technology her students could use to create art. Evidence of the value of the research is in the impact it made in this particular art program, and in how the research findings serve as an exemplar case of matching pedagogical approach (i.e., what is acting and how) to desired social effects of structure, power, and organization.

## Practices of Reciprocity and Reflexivity

Reviewing Patti Lather's (1991) critical self-aware strategies for reciprocal reflexivity of data and theory, I reflect on my feminist research practices of reciprocity and reflexivity, especially regarding if and how I engaged these strategies for critical self-awareness:

- Seek to understand worldviews of research participants with a "dialogic research design where the respondents are actively involved in the construction and validation of meaning" (p. 63).
- Use dialogical practice to make the research mutually educative.
- Expose ideology (i.e., expose what seems natural).
- Proceed from participants' understanding to reveal contradictions.
- Invite participants to critically react to accounts of their world.
- Stimulate a "theoretically-guided program of action" (p. 64).
- Mediate without imposing.
- "Empirical evidence must be viewed as a mediator for a constant self and theoretical interrogation between self and theory" (p. 62).

The following questions may be helpful in guiding researchers to decide if social justice action research or advocacy research is the path for you.

## 1. When Is Research Enacted for Change?

Enact research for change when the need to change something is great and seems necessary, and most importantly, when there is injustice for one, there is injustice for all. Audrey Lorde states it best regarding why, when, and how to enact social justice research as advocacy:

> It is learning how to stand alone, unpopular and sometimes reviled, and how to make common cause with others identified as outside the structure in order to define and seek a world in which we can all flourish. It is learning how to take our differences and make them strengths. For the master's tools will never dismantle the master's house. They may allow us temporarily to beat him at his own game, but they will never enable us to bring about genuine change. In our world, divide and conquer must become define and empower. (Lorde, 1984, p. 112)

## 2. How Do Actions Transform Existing Oppressive Structures?

Alison Weir's writing on collective action in transformative identity politics suggests how change can occur through a dialogic process involved in action research:

> When I identify with you, I am reconstituting myself, my identity, through traveling to your world; through coming to know you, by listening to, witnessing your experience, I am expanding myself to include my relation to you. But rather than assimilating you into myself, assuming sameness, or simply incorporating your difference without change to myself, I am opening my self to learning about and recognizing you: I cannot do this without changing who I am. And because this process changes our relationship to each other, it also changes you – more so, of course, if the process of identification goes both ways. (Weir, 2008, p. 125)

## 3. How Do We Know? Is Observation Pure? Are There Facts? What about Validity?

Critical to developing advocacy ethics is asking questions to reflect on how you know something to be real, true, valuable, and, most importantly, socially just. For the pragmatist philosopher and educator

John Dewey (1997) in his writings on concepts of selfhood, reflectivity and doubt are necessary for inquiry to have the potential to lead to personal and societal change. Clara Fischer (2010), from a feminist-Deweyan analysis of change, argues,

> It is when we come to understand *what* it is we are to direct our doubt at, what we should be doubting, what is causing the contradiction in our lives, that we begin the process of coming to feminist consciousness. (p. 78)

A dialogic methodology is one way to perceive contradictions in our lives, and to find the energy from shared capacity building for resisting or subverting oppressive systems, and to feel ethically accountable for failing to do so. Since context or particular conditions may limit capacities or the ability to be situated in positions of power for the agency needed to change oppressive systems, advocacy ethics requires listening and working with others to question what is socially just. The learning activities at the end of this chapter are entry points to begin action research as advocacy for social justice.

## Key Terms

**Intersectionality:** This is the premise that gender and sexuality intersect with race and class, which are historically variable and conditioned by social and political demands. Conceptualizing, planning, implementing, and reflecting to develop further actions toward changing conditions and situations requires an ongoing process of seeking to understand how intersections of gender, race, and socioeconomic class constitute lived experiences and are manifested in undue privilege and oppressive living conditions (Dill & Zambrana, 2009).

**Intertextuality:** This refers to how every text absorbs and transforms other texts. In this context, the term "text" refers to visual, verbal, and other communicative forms. Intertextuality is the intercultural action of linking and making connections between ideas, people, objects, times, and places.

**Global intertextuality:** This (i.e., transcultural action) requires intersubjective critique of specific, particular, and local ways of knowing. Translation, transfer, critique, and questioning of relevancy to the context are necessary for intertextual understanding (Paatela-Nieminen, 2008).

## Activities

Each of the three learning activities below is intended for consciousness raising in ways that consider individual injustice as a systemic problem. Each is an approach to reciprocal, relational, and situative aspects of social justice action research advocacy. "Situative research focuses on properties of activity systems, especially on principles of coordination between the various components of such systems—the participants, the technological and material tools in the subject-matter domain of their activities" (Greeno, 2006, p. 87).

1. **Consciousness Raising**

In small groups, respond to the following set of prompts, and look for connections to plan an action that is not an individual solution, but rather a change to an underlying systemic and socially instituted problem. Rather than confessional stories, share stories to illuminate difference and nuances to draw attention to the complexity of developing an action that all agree to implement.

a. When did/do you become aware of:
   - The shape of your body?
   - The color of your skin?
   - Your gender?
   - Your sexual identity/orientation?
   - Your socioeconomic class?
   - Your religious/spiritual views?
   - Your political views?
   - Your age?

Describe and reflect on an incident, experience, or gradual process in terms of giving or lacking privilege or power.

b. Intersubjective Prompts:
   - How do you see yourself?
   - What is your desired self?
   - How do others see you?
   - How does cyberspace construct your identity by the information you give and the choices you make?
   - Do you have a race? What does race mean?
   - How are the conditions of others part of you?
   - What is your family's history through the lenses of various theories of race (i.e., religious, scientific, ethnicity, class, and nation based)?

- How has capitalism worked with racism to write you into the history taught in pre-K–12 schools? What is your history through postcolonial and feminist lenses?

2. **Systemic: Personal as Political**

The NAMES project discussed earlier is this chapter is an example of action research as advocacy. Action researchers can make consequences of current trajectories visible to public consciousness in ways that sustain a momentum of change. The following are methods for beginning inquiry in ways that suspend judgment and yet develop contradictions and doubts that can generate an ethics of social justice advocacy:

a. Define the concept "woman" (exhibited, observed, classified).
b. Define the concept "man" (exhibited, observed, classified).
c. Define "human" (exhibited, observed, classified).
d. What is signified and with what political consequences?

3. **Relational: Action Impacts Whom and for What Purpose?**

Every position is defined as much by what it includes as what it excludes. Envision new potentials with different placements, positionality, and subjectivity. Meaning systems involve relationships, which are not essential and universal, and therefore different social groups will develop meanings from the networks and processes that they produce and experience.

a. How can you combine scholarship and advocacy to create new insights and possibilities to change systemic trajectories toward social justice?
b. How can you (re)use and (re)design specific artifacts and particular practices to (re)solve problems of (re)occurring situations of inequity?

## Notes

1. See the National Art Education Women's Caucus website with transcriptions of the lobby sessions linked at http://naeawc.net/activism.html. More than forty people recorded their responses to a question posed at the 2010 WC Lobby Session, "What is the image of a feminist in the field of art education today?"
2. See Keifer-Boyd (2010) for examples of each of these four strategies.
3. A list of the teams is at http://www.grace-network.net/research_teams.php.

4. The GRACE Network (2009) continues to grow and includes Africa and Arab countries with the mission stated on the home page, "Transforming Our Gendered World Through Research-Informed Action." See http://www.grace-network.net.
5. The book can be read online, downloaded from the Internet, or purchased in paperback. See http://web.idrc.ca/openebooks/399-7/.

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# Contributors

**Faith Agostinone-Wilson** is associate professor of education at George Williams College of Aurora University. She is the author of *Marxism and Education beyond Identity: Sexuality and Schooling* (2010) and a member of the *Rouge Forum*. Faith lives in Waukegan, Illinois, and her research interests include education policy, sexuality, and counterhegemonic research methodologies.

**Doug Boughton** is the director of the School of Art at Northern Illinois University and a professor of art and education. He has served as world president of InSEA (International Society for Education through Art), chief examiner visual arts for the International Baccalaureate Organization, foundation director of the National Art Education Research Council of the Australian Institute of Art Education, and consulting professor in art education to the Institute of Education in Hong Kong. His research interests include assessment of student learning in art, portfolio assessment, and art curriculum policy.

**Joan Flynn Fee** is professor and chair of the EdD program at Aurora University where she teaches courses in research methods and assessment. She received her PhD from the University of Chicago in political science, specializing in survey research. Before teaching at Aurora University, Dr. Fee headed the e-learning development group at Hewitt Associates, an international consulting firm. A regular presenter at American Educational Research Association (AERA) conferences, she is also a member of the National Association for Bilingual Education's (NABE) research board. Her current research interests are educational partnerships and acculturation issues.

**Kit Grauer** is a professor in the Department of Curriculum and Pedagogy at the University of British Columbia. She is actively involved in art education organizations at the local, national, and international

levels. Dr. Grauer's interests include arts-based and image-based research, international issues in art education, teacher education, museum education, and art curriculum and instruction. She has given numerous presentations, in-service sessions, and keynote speeches in these areas. Her current research includes the use of artistic pedagogical strategies in both preservice and in-service teacher education, museum education, and community-based new media education.

**Karen Keifer-Boyd** is a professor of art education and women's studies at the Pennsylvania State University. She has co-authored *InCITE, InSIGHT, InSITE* (NAEA, 2008); *Engaging Visual Culture* (Davis, 2007); co-edited *Real-World Readings in Art Education: Things Your Professors Never Told You* (Falmer, 2000); and served as editor for the *Journal of Social Theory in Art Education* and *Visual Arts Research*. In 2005, she co-founded the journal *Visual Culture & Gender*. Her research is translated into several languages, recognized with Fulbright awards (2006 Finland and 2012 Austria), and focuses on feminist methodologies for teaching critical and creative inquiry with dynamic/interactive technologies.

**Sheri R. Klein** is a visual artist, researcher, art educator, and author. Her degrees include a doctorate in curriculum and instruction in art education from Indiana University, Bloomington, and an M.F.A. in Painting and Drawing from the School of the Art Institute of Chicago. She has taught undergraduate and graduate level, art, design, art education and teacher education courses. Her research interests include praxis-oriented pedagogy and research in art + teacher education, arts-based research, and graphic narratives as an art form for self-reflexive critical visual inquiry. Her edited and authored books include *Teaching Art in Context : Case Studies for Preservice Art Education*, published by the National Art Education Association in 2003, and *Art and Laughter*, published by I. B. Tauris Press in 2007.

**Karinna Riddett-Moore** is currently the art instructor at Notre Dame Academy, a Marist and International Baccalaureate school in Duluth, Georgia, where she teaches K–8 visual art. She received her BFA in studio art, a masters in art education, and a PhD in art from the University of Georgia, Athens. Dr. Riddett is an active member of the National Art Education Association and the American Educational Research Association, and she serves on the board for the Georgia Art Education Association, where she represents independent schools. Her research focuses on a/r/tography. Her dissertation *Developing an*

*Arts of Living* received the 2012 Elliot Eisner dissertation award from the National Art Education Association and the 2012 dissertation award from the American Educational Research Association's Arts and Learning Special Interest Group. She lives in Buford, Georgia, with her husband and two young sons.

**Richard Siegesmund** is associate professor in the faculty of Art + Design Education at Northern Illinois University. Previously he served as cochair of art education at the University of Georgia, Lamar Dodd School of Art. Following an extensive career in arts administration and museum management, including service as deputy director for curatorial affairs at the San Francisco Museum of Modern Art, Dr. Siegesmund completed his doctoral work in art education at Stanford University under the guidance of Elliot Eisner. His research into middle school art education and the 1997 NAEP arts assessment received the 2003 Manuel Barkan Memorial Award from the National Art Education Association. With Melisa Cahnmann, he edited *Arts-Based Research in Education: Foundations for Practice*, published by Routledge in 2008. His research focuses on qualitative reasoning, aesthetic theory, and arts-based research.

**Gerald (Jay) Thomas** is an associate professor of education at Aurora University. He holds a doctorate in educational psychology from Northern Illinois University and teaches courses on assessment, program evaluation, and research methods. He has coauthored textbooks on student research, classroom assessment, and the development of STEM schools. He is also a past president of the National Consortium for Specialized Secondary Schools of Mathematics, Science, and Technology (NCSSSMST), a consortium of specialized secondary schools serving students gifted in math, science, and technology.

**Gail A. Zieman** is currently an independent thesis/dissertation coach. For the previous six years, she taught at George Williams College in Wisconsin where her primary assignment was teaching action research to graduate students in education. Dr. Zieman has a PhD in educational policy and leadership from Marquette University. She is active in literacy research through the Wisconsin State Reading Association and is a member of the Action Research Special Interest Group of the American Educational Research Association. Her passion focuses on action research as a transformational tool for both teachers and institutions. She lives outside of Milwaukee, Wisconsin, with her husband.

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