CREATING LEARNING SPACES

The Nature of Action Research

Learning spaces may be bounded in some instances, such as the walls of a classroom, but they can also assume many other forms (e.g. creating time for individual reflection or establishing a community of learning for a specific purpose). Learning spaces are created as a result of individuals' experiences and interactions with others and the environment. This chapter provides an introduction to action research and its potential to create different types of learning spaces. It situates action research within the broader context of educational research; examines the nature of action research (definitions and theoretical underpinnings); provides a brief history of the development of action research; and describes the action research cycle.

ACTION RESEARCH IN THE CONTEXT OF EDUCATIONAL RESEARCH

As a long-term facilitator of action research, one of my roles is that of teacher. As teachers experience their first encounters with action research, they need to develop a sound understanding of the nature of action research and how to engage in the action research process prior to planning a classroom or school-based project. During early planning sessions with collaborative groups of action researchers, I often ask group members to brainstorm descriptors that reflect their understanding of educational research. Responses typically include words and phrases such as "publishing," "scientific," "generating knowledge," "gathering evidence," "collecting data," and "understanding things around us." Many of these descriptors reflect the essence of educational research. McMillan (2004) defines educational research as "systematic, disciplined inquiry applied to educational problems and settings" (p. 4). Blaxter, Hughes, and Tight (2001) state that all research should be "planned, cautious, systematic, and reliable ways of finding out or deepening understanding" (p. 5). Educational research moves beyond ways of knowing that are based solely on personal experience or sources of knowledge that are idiosyncratic; it involves finding answers to questions or exploring issues through a systematic process of collecting, analysing, and interpreting data or evidence and then drawing conclusions. It can inform decision-making about the educational policies and practices we adopt.

While many research traditions exist and each is informed by particular beliefs about the nature of the world and how we explore and understand it, two broad research traditions have been delineated. Ary, Jacobs and Razavieh (2002) describe quantitative research, one of these traditions, as "objective measurement and statistical analysis of numeric data to understand and explain phenomena," whereas

qualitative research, the other broad tradition, "focuses on understanding social phenomena from the perspective of the human participants in the study" (p. 22). Quantitative research involves controlled settings, reflecting a philosophical perspective that the social world can be understood in the same way as the physical world. In other words, principles and laws can be discovered and then applied to predict or understand human behavior. In contrast, philosophic perspectives underpinning qualitative research approaches are informed by the notion that social reality is constructed and experienced by individuals in different ways, based on their interactions with others and events and the corresponding meanings that they attach to those events. Quantitative approaches to research in education were prevalent until the 1970s. Today, quantitative and qualitative approaches are well-represented in the research literature, and mixed methods (drawing from both traditions) are often adopted depending on the goals and purposes of a study.

Educational research may also be categorized based on its purposes and how research findings are used. For example, basic research is conducted mainly for the purpose of generating theory that attempts to understand, explain, or establish generalizations. Applied research, unlike basic research, seeks to apply theories and ideas to practical settings in an attempt to solve problems and issues, and to inform decision-making about real world events and phenomena. While most educational research is applied, some researchers do engage in basic research. Action research is considered a form of applied research that may be adopted to examine specific issues or address problems that are classroom-, school-, or society-based.

THE NATURE OF ACTION RESEARCH

A review of the literature on action research finds numerous definitions. The following represent how several authors conceptualize action research. It is:

> a process by which practitioners attempt to study their problems scientifically in order to guide, correct, and evaluate their decisions and actions (Corey, 1962, p. 6).

> any systematic inquiry conducted by teacher researchers, principals, school counselors, or other stakeholders in the teaching/learning environment to gather information about how their particular schools operate, how they teach, and how well their students learn. This information is gathered with the goals of gaining insight, developing reflective practice, effecting positive changes in the school environment (and on educational practices in general), and improving student outcomes and the lives of those involved (Mills, 2003, p. 5).

> a form of self-reflective inquiry undertaken by participants (teachers, students, or principals, for example) in social (including educational)

situations in order to improve the rationality and justice of (a) their own social or educational practices, (b) their understanding of these practices, and c) the situations (and institutions) in which these practices are carried out (Carr & Kemmis, 1986, p. 162).

a substantive act with a research procedure; it is action disciplined by inquiry, a personal attempt at understanding while engaged in a process of improvement and reform (Hopkins, 2002, p. 42).

used in almost any setting where a problem involving people, tasks and procedures cries out for a solution, or where some change of feature results in a more desirable outcome (Cohen, Manion & Morrison, 2007, p. 297).

These definitions share a number of commonalities. Action research is systematic, intentional research that is carried out by practitioners themselves and is not imposed by others. It is insider research in the sense that those directly involved in the situation take action to improve their own practice and their understanding of that practice, while resolving problems. It involves an "ethical commitment to improving society (to make it more just), improving ourselves (that we may become more conscious of our responsibility as members of a democratic society), and ultimately improving our lives together (building community)" (Holly, Arhar, & Kasten, 2005, p. 31).

As you read more and more about action research, you will find varying labels for action research (e.g. classroom-based action research, participatory action research, school-wide action research, individual-researcher action research). These reflect different purposes and theoretical foundations of action research. Because of the plethora of conceptions of action research, Rearick and Feldman (1998) developed a framework as a guide to understanding the multi-faceted nature of action research. In reviewing the many models and categories of action research, they proposed that action research be viewed as a space with three dimensions: theoretical orientation, purpose, and reflection. Building on the work of other authors (Carr & Kemmis, 1986; Grundy, 1987; Habermas, 1971), they describe three orientations: technical, practical, and emancipatory. The technical orientation involves control. External researchers or individuals with special expertise determine the research questions; and the focus is product-oriented and on determining effective practices. Because the research is directed by others, practitioners may not take ownership or "buy in" to the research. The practical orientation, on the other hand, is focused on understanding particular contexts, such as school and classroom events, through group reflection and consensual meaning-making. Critical orientations are concerned with issues of power, and finding ways and means through research to empower individuals and groups to effect societal change.

In terms of the purpose of action research, Rearick and Feldman, drawing upon the work of Noffke (1997), articulated three broad foci: a) personal growth

(developing new insights into one's own professional knowledge and practice), b) professional understanding (teacher development and generation of new knowledge in the area of teaching and learning), and c) political empowerment (becoming aware of economic, social, gender, and racial inequities and directing social action to overcome these inequities).

The third dimension involves various forms of reflection (autobiographical, collaborative, and communal). Autographical reflection focuses on the researcher's personal introspection about beliefs, perspectives, and actions. As the reflection becomes more public, it becomes collaborative where groups of individuals pose questions that move beyond the self. In this form of reflection, there is a move towards understanding the actions of others and how the self is constructed in relation to the social context. Communal reflection then situates the self in relation to the broader society and issues such as social justice. Public meaning is achieved through public debate and dialogue.

In chapters 6 to 9, four cases studies of teachers engaging in action research are presented. I invite you to read and examine one or all cases from the perspective of the Rearick and Feldman framework. What orientation to action research is reflected? What are the primary goals of the research and what types of reflection are utilized by the teacher action researchers?

ACTION RESEARCH: A BRIEF HISTORY

Kurt Lewin is generally given credit for coining the term action research (Lewin, 1946). Lewin believed action research provided a means to solve practical social problems, to improve social conditions, and to "discover 'general laws of group life'" (Peters & Robinson, 1984, p. 115). Throughout the 1950s, action research in education continued to be championed through the work of Stephen Corey. According to Corey (1953), practitioners were pivotal to the improvement of curriculum through investigating their own problems and concerns. Near the end of the decade, action research moved into the background as the focus on rationalist approaches to curriculum development became entrenched. There was limited tolerance for a form of research (action research) that recognized the key role of educators in the development of curriculum and the creation of educational theory. Later, in the 1970s, action research gained momentum again through the work of Lawrence Stenhouse. For the betterment of schools, he believed "curriculum research and development ought to belong to the teacher … [and] is based on the study of classrooms. It thus rests on the work of teachers" (Stenhouse, 1975, pp. 142-143). His work was supported and developed through the efforts of John Elliott and Clem Adelman in the Ford Teaching Project (Elliott, 1976-1977).

In the past three decades, educational action research has grown in popularity and is being adopted and promoted by many educators, including K-12 teachers, school and school district administrators, and university researchers, as a means to effect change. Many action research resources are available, including:

– *The Ontario Action Researcher* at http://www.nipissingu.ca/oar/
This is an electronic peer-reviewed journal that targets the work of elementary, secondary, and university teachers.
– *The Collaborative Action Research Network* (CARN) at
http://www.did.stu.mmu.ac.uk/carnnew/
This network supports action research through the publication of action research projects from many disciplines (education, health, etc.) and by providing a forum for engaging in critical dialogue about many aspects of action research.
– *Educational Action Research* at
http://www.tandf.co.uk/journals/titles/09650792.asp
This refereed international journal publishes reports of a variety of action research and related studies in education and across many professions.

A quick search of the Internet or your local library databases will reveal many other resources and materials related to action research.

THE ACTION RESEARCH CYCLE

Now that you have had an opportunity to situate action research within the context of educational research, and to consider the characteristics of action research, we will explore the action research cycle. We will ask, how do practitioners carry out action research, thus creating spaces for learning? The action research process is typically represented as a cycle or spiral involving a number of stages, although the number of stages may vary. For example, Lewin's approach to action research, as described by McKernan (1991), starts with

a general idea or difficult problem requiring resolution. This is followed by further fact-finding … resulting in an overall plan of how to solve the problem. This planned action is implemented, and monitored in an attempt to evaluate the effectiveness of the first action step, to plan the next step and to modify the 'overall plan' … The researcher then spirals into developing a second and possibly further action steps (p. 18).

Others have described the action research cycle in a similar manner. Stringer (2004) presented the action research process as involving a) research design (defining, exploring, and framing the issue; conducting a review of the literature; checking the validity and ethics of the work), b) data gathering (using a variety of techniques and sources), c) data analysis (identifying key features of the experiences), d) communication (dissemination of the outcomes), and e) action (using the outcomes of a project to work towards a resolution to the issue).

In chapters 2 to 5, the steps in the action research cycle will be discussed in more detail (see Figure 1). The initial step involves identifying an issue or problem, thus linking an action with an idea. For example, teachers may wish to explore the reasons for students' lack of engagement in learning science. After identifying the

problem, the researcher then explores the nature of the problem, generating ideas about how the problem or issue can be addressed. This step is referred to as *reconnaissance* (Elliott, 1991), describing and explaining the facts of the situation or context. Once the action research group has clarified the idea or problem, a "plan of action" is established − how will data be collected and how will the implementation of the plan be monitored. Next, the group analyzes the results of the implementation, and states conclusions. Data analysis should not only occur at the end of data collection, but also throughout the entire implementation process. If the plan has not resulted in positive change (e.g. students have not become more engaged in science class), then the plan may be revised and further implementation may occur. All stages of the action research cycle require the group to engage in monitoring, reflecting, and evaluating.
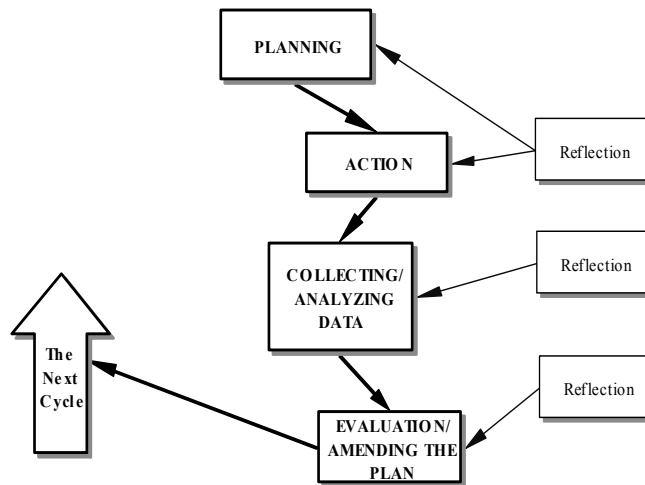
Figure 1. The action research cycle.

Chapter 6 describes the experiences of a colleague of mine, Katrina, as she completed an action research project. The following summarizes how she engaged in the action research process:

– Issue or Problem
Katrina wanted to shift her approach to teaching science from teacher-directed to being student-directed.

– Research Focus

Katrina adopted a webquest to create an inquiry-oriented learning environment for her grade one students.

– Research Questions
How does a webquest engage students in learning?
How does using a webquest influence the role of both the teacher and the student in the science classroom?

– Plan of Action
This involved collaboration with two other teacher researchers. Katrina engaged in web-based research and completed a literature review; adapted an existing webquest for use in her classroom; integrated the webquest into a unit on *Living Things*; developed and/or selected appropriate assessment tools and learning activities; considered ethical issues; sent a letter to parents about the action research project; developed a timeline for implementation; and selected data collection sources and methods.

– Implementation
Katrina implemented five lessons to engage students in inquiry through a webquest.

– Data Collection
Data collection methods and sources included classroom observational notes, a parent survey (baseline data collected prior to implementation), student-generated work, a student survey, and teacher reflective journal entries.

– Data Analysis
This was ongoing during implementation, but was more intensive at the end of implementation. Katrina looked for evidence of changes in student learning. She tabulated frequencies of responses from parent and student surveys, examined student work and compared observational notes and survey responses to look for common themes related to student behaviors, and analyzed her reflective journal entries to examine changes in her own classroom behaviors and beliefs about teaching.

– Revised Plan of Action
Katrina continues to use the webquest and is refining her teaching through inquiry. In addition, she recognizes the need to provide students with more consistent feedback and to elicit more response from them about how they are learning through webquests.

Engaging in the action research process provides a means for teachers to view themselves differently and to adopt an inquiry stance to their teaching (Cochran-Smith & Lytle, 2001). Approaches to action research that are teacher-centred,

teacher-driven, and afford teachers opportunities to situate themselves as knowledge-creators and inquirers (Carson & Sumara, 1997) have the potential to positively impact teaching and learning and can greatly influence the teaching profession.

QUESTIONS FOR REFLECTION

– How is action research different from your current practice of reflection?
– Why would collaboration be an important element of action research?
– Identify an issue or concern you would like to explore in your own classroom. How would you use action research to explore this problem?