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The Value of Action Research in Middle Grades Education

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ABSTRACT

Action research is one of the relevant methodologies for addressing research questions and issues in middle grades education. Accounting for nearly 20% of published middle grades research studies (Hough, 2003), action research has emerged as an important and appropriate research method. In addition to reviewing the historical context, this article provides definitions of action research and examines pertinent issues including dilemmas and benefits that relate to action research methodology. After identifying two research designs, participatory and practical, data collection techniques for practical action research are discussed. Specific information about action research in middle grades education includes a description of two exemplars. The article closes with recommendations for future research and concluding remarks.

INTRODUCTION

Educators conduct action research (also referred to as teacher research or practitioner research) in a range of contexts (Zeichner, 2001). In middle grades education, action research accounts for nearly 20% of the research studies published from 1991 to 2001 (Hough, 2003). Action research compels educators to take action and think reflectively about those actions to bring about positive educational change (Mills, 2000). This cycle of systematic inquiry affords educators with opportunities to gain insights into the processes of teaching and learning. Action research is associated with (1) the development of critical pedagogy in preservice teachers (Liston & Zeichner, 1987), (2) increased learning among new teachers (Wilson, Floden, & Ferrini-Mundy, 2001), and (3) the expansion of practice-based knowledge of inservice teachers (Cochran-Smith & Lytle, 2001). Action research holds an important position in teacher education, professional development, and school reform (Cochran-Smith & Lytle, 1999).

Similar to other forms of research, the purpose of action research “is to generate new knowledge” (McNiff & Whitehead, 2006, p. 12). McNiff and Whitehead suggest that practitioners can use action research to improve their understanding, to develop their learning, or to influence others’ learning. They remind practitioners, however, that action research is not appropriate for drawing comparisons, showing correlations, or identifying causal relationships.

Taking place in the social and cultural context of schools, educational action research is a dynamic process (Caskey, 2005). It entails planning, action, observation, and reflection, which practitioners employ systematically to examine the effectiveness of their own teaching practice. Teachers assume the role of primary researchers of these action research investigations. This emphasis on teacher ownership is among the most noteworthy ways that teacher-based action research differs from traditional research (Reagan, Case, & Brubacher, 2000).

The purpose of this article is to examine the importance of action research as a relevant methodology for addressing middle grades research questions. After reviewing the historical context of action research and exploring various definitions of action research, issues related to this methodology, and information about action research studies conducted in the middle grades—including a pair of exemplars—will be reported. Subsequently, recommendations for future action research will be considered.

HISTORICAL CONTEXT

Action research in education has an interesting and relatively recent history. In the 1940s, Kurt Lewin, a social psychologist, coined the expression *action research* to describe this type of inquiry that did not separate the research from the action needed to solve the problem (McFarland & Stansell, 1993). The antecedents of action research are often traced to John Dewey (1929), a progressive educational theorist, who reasoned that teachers should apply scientific problem solving to education. Stephen Corey (1953), Dean of Teachers College at Columbia University, advanced action research in education by drawing on the work of Lewin and Dewey. Corey theorized that teachers would make better educational decisions if they based decisions upon research conducted in their own classrooms. He advocated a research cycle that included problem identification, hypothesis formulation with a specific goal, systematic documentation of actions and evidence of goal attainment, interpretation of the evidence and generalizations about the actions, and then, ongoing testing of those generalizations. In the 1960s support for action research waned in the U.S., while interest grew in the United Kingdom. Known as the teacher as researcher movement, this teacher-led effort developed in response to the unpopular secondary school curriculum. In the 1970s Lawrence Stenhouse, John Elliott, and others initiated a series of curriculum development projects to support teachers as curriculum developers (Arhar, 2005). Stephen Kemmis (a student of Elliott) and Wilfred Carr brought Elliot's ideas to Australia and developed another model of action research—*emancipatory* action research (Carr & Kemmis, 1986). The purpose of emancipatory action research was to improve the justice of teachers' practice. During the same time, another model emerged, *participatory* action research, in third world countries. The goal of this model of research was to overcome oppressive conditions.

The contemporary model of action research developed during the 1980s, in large part, because of the growing acceptance of qualitative research and case study methods. During this same time, teachers were beginning to gain acceptance as educational leaders and scholars of their own practice. Nancie Atwell (1987), for example, disseminated her study of the teaching of writing in her text, *In the Middle: Writing, Reading, and Learning with Adolescents*. Additionally, the reflective practitioner movement (Schon, 1983) was associated with practical action research—context specific inquiry conducted by teachers. By the 1990s, action research was an integral part of many teacher education programs (Cochran-Smith & Lytle, 1999) and began to acquire some degree of legitimacy in the research community. The proliferation of action research networks (e.g., Collaborative Action Research Network, Cornell Participatory Action

Research Network, and Teacher Inquiry Communities Network) and special interest groups of the American Educational Research Association (e.g., Action Research, Teacher as Researcher, and Self-Study of Teacher Education Practices) are indicative of sustained interest and the more positive standing of research conducted by practitioners.

DEFINITIONS OF ACTION RESEARCH

From its inception to the present, researchers and educators have offered definitions for action research. Among these definitions are:

- Action research is a three-step spiral process of (1) planning which involves reconnaissance; (2) taking actions; and (3) fact-finding about the results of the action. (Lewin, 1947)
- Action research is the process by which practitioners attempt to study their problems scientifically in order to guide, correct, and evaluate their decisions and actions. (Corey, 1953)
- Action research is research undertaken by individuals or groups, which is founded on an active ethical commitment to improve the quality of life of others, is critically reflective in nature and outcome, is collaborative with those to be affected by actions undertaken, and is made public. (Arhar, Holly, & Kasten, 2001)

McKernan (1996) provided a most comprehensive definition and description of action research. He suggested that action research is the reflective process whereby in a given problem area, where one wishes to improve practice or personal understanding, inquiry is carried out by the practitioner—*first*, to clearly define the problem; *secondly*, to specify a plan of action—including the testing of hypotheses by application of action to the problem. Evaluation is *then* undertaken to monitor and establish the effectiveness taken. *Finally*, participants reflect upon, explain developments, and communicate these results to the community of action researchers. Action research is systematic, self-reflective inquiry by practitioners to improve practice. (p. 5)

Simply stated, action research is a cycle of inquiry, reflection, and action that educators use to address a specific problem or issue in a specific educational setting in order to improve their own practice.

ISSUES RELATED TO ACTION RESEARCH

Perspectives on Research

Practitioners frequently view research as “an integral part of what they do in the ordinary course of events as a way of improving their regular practice” (Pritchard, 2002, p. 4). In contrast, academic researchers and Institutional Review Boards adhere to the regulatory definition of research: “*Research* means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge (34 Code of Federal Regulations 97.102, cited in Pritchard, 2002, p. 4). Practitioners use the term research more broadly and do not seek to generalize their findings. Pritchard (2002) observes that practitioner research is “complex because its dual purposes of generating knowledge and achieving a practical end are entangled” (p. 4). Critics of action research raise questions about teachers’ ability to balance the roles of teacher and researcher.

Status

Though the reputation of action research has improved in the past two decades, it does not have universal acceptance in the research community. Action research continues to be referred to as “an informal process of research” (Creswell, 2005, p. 568) and “a catchall label for research done by teachers, administrators, and other on-site educators to resolve problems as the local level” (Charles & Mertler, 2002, p. 301). Perceived as less rigorous, action research is often relegated to a separate and lesser category of research (Anderson & Herr, 1999). In the *Introduction to Educational Research*, for example, Charles and Mertler, contend that “action research is the least precise and most subject to errors of bias, reliability, and validity. Findings are limited to the setting where the research was done; if they are applied elsewhere it must be understood that the results may well be different” (p. 311).

Ethical Dilemmas

Ethical dilemmas may arise due to the dynamic nature of action research. Pritchard (2002) identifies specific problems with regard to informed consent—the subject’s agreement to participate. First, action researchers may not offer adequate information about the purpose and design (including data collection methods) of their study. In some cases the research design may be evolving, so neither the researcher nor subjects know the full extent of the subjects’ participation. Second, the competence of the subjects—often children—may come into question. The subjects’ age, education, and

experience affects their ability “to appreciate fully the nature of the research of the risks involved” (p. 5). Third, the voluntary nature of participation is problematic since teachers “authoritative status in the classroom is an unavoidable and undue influence” (p. 5).

Pritchard also asserts, “Practitioners may have a right to devote their own time and effort to research, but they do not have a right to demand the cooperation of others.” (p. 5). In other words, teachers may not require students to take part in their action research investigations—they may only invite their participation. While teachers are obligated to provide an explicit rationale for and detailed description of their research, their students are under no obligation to participate.

Theoretical Underpinnings

Action research is unique in how the researcher is positioned (ontology), the relationship between the knower and what is known (epistemology), the process of generating knowledge (methodology), and how the research is used (social purposes) (McNiff & Whitehead, 2006). To understand the importance of these distinctions in action research, McNiff and Whitehead summarize these theoretical underpinnings. Ontologically, action researchers perceive themselves as trying to live in a way that is consistent with their values. These values include how they see themselves in relation to others in their social contexts. The assumption is that knowledge is uncertain and is often subjective and biased. Epistemologically, action researchers are the object of their inquiries. Methodologically, action researchers conduct the study and see themselves as agents of change. The methodologies tend to be open-ended and developmental. With regard to the social purposes of action research, it aims to improve practice and improve learning. Action researchers hold themselves responsible for their own actions and thoughts.

Importance

The significance of action research in educational settings is well documented (e.g., Charles & Mertler, 2002; Johnson, 2005; Mills, 2000). Mills asserts that action research:

- Encourages change in the school
- Fosters a democratic approach to education
- Empowers individuals through collaboration on research projects
- Position practitioners as learners who seek to narrow the gap between practice and their view of education
- Encourages teachers to reflect on their practice
- Promotes the testing of new ideas (as cited in Creswell, 2005)

In a similar vein, Johnson (2005) contends that action research is important because it has the potential to (1) bridge the gap between theory and practice, (2) empower teacher to become change agents, and (3) enhance teachers' professional development. Likewise, Charles and Mertler (2002) note,

Action research provides benefits not often encountered in other types of research. It resolves an immediate problem. It can produce a tangible product or useful procedure. It has great potential for bringing about improvements in teaching and learning. It is relatively easy to carry out, and it can help make classroom experiences more enjoyable for students and teachers alike. (p. 310-311)

Benefits

The merits of incorporating action research in teacher education programs—preservice and inservice warrant consideration. First, action research calls for teachers to examine systematically their own practice to improve student's academic achievement. Second, action research can deepen preservice teachers' understanding of classroom and school experiences when their teacher educators guide its use. Potentially, these aspiring teachers will not only feel empowered to "take action" based on evidence gathered during their student teaching experience, but will also continue this practice in their future classrooms.

For inservice teachers, action research can become an integral part of their professional development as well as their school's improvement efforts. Action research methodology underscores the value of teacher ownership of pedagogy and curricula as well as collaboration among teachers who wish to improve their collective practice. Glanz (2003) contends that [action] research can have immeasurable benefits if properly used, for it does the following:

- Creates a system wide mindset for school improvement—a professional problem-solving ethos.
 - Enhances decision making—greater feelings of competence in solving problems and making instructional decisions. In other words, action research provides for an intelligent way of making decisions.
 - Promotes reflection and self-assessment.
 - Instills a commitment to continual improvement.
 - Creates a more positive school climate in which teaching and learning are foremost concerns.
 - Impacts directly on practice.
 - Empowers those who participate in the process.
- Educational leaders who undertake action research may

no longer, for instance, uncritically accept theories, innovations, and programs at face value. (p. 19)

In sum, action research can foster professional learning communities in which teachers engage in professional dialogue and a renewable growth cycle.

ACTION RESEARCH DESIGNS

Two research designs are prevalent in action research—practical action research and participatory action research (Mills, 2000). An overview of the distinguishing features of these two designs can be found in Table 1. The practical action research design “involves teachers examining a school situation with a view toward improving practice,” while the participatory design “seeks to improve the quality of organizations, community, and family lives” (Creswell, 2005, p. 568).

Table 1

Practical and Participatory Action Research Designs

Practical Action Research

- Studies local practices
- Involves individual or team-based inquiry
- Focuses on teacher development and student learning
- Implements a plan of action
- Leads to a teacher-as-researcher

Participatory Action Research

- Studies social issues that constrain individuals
- Emphasizes equal collaboration of participants
- Focuses on life enhancing changes
- Leads to an emancipated researcher (adapted from Creswell, 2005)

Inherent to practical and participatory action research are research principles and procedures that are present in other research designs. Essential steps in action research include (1) identifying a problem or issue to study, (2) collecting data, (3) analyzing and interpreting data, and (4) taking action. Other steps include reviewing the literature and sharing results. Notably, action research is a recursive process, rather than a linear one, where the essential steps may be repeated or rearranged (Johnson, 2005).

Data Collection Techniques

Action researchers make decisions about the type of data to gather: quantitative, qualitative, or both. Mills (2000) suggests a

taxonomy of data collection techniques that includes three perspectives: experiencing, enquiring, and examining (Table 2). Experiencing occurs when the researcher observes and takes field notes. Enquiring is when the researcher asks subjects for information. Examining happens as researchers use and make records.

Table 2

Taxonomy of Action Research Data Collection Techniques (Mills, 2000).

Action Research Data Collection Techniques		
Experiencing	Enquiring	Examining
• Participant observation (active participant) • Privileged, active observer • Passive observer	• Informal interview • Structured formal interview • Questionnaires • Attitude scale (Likert, Semantic differential) • Standardized tests	• Archival documents • Journals • Maps • Audio and videotapes • Artifacts • Field Notes

As with other research designs, Creswell (2005) notes that the selection of data collection methods “depends on the questions, time and resources, availability of individuals, and sources of information” (p. 563). To address credibility issues, action researchers examine multiple data sources and use triangulation—the process of bringing multiple data sources together to gain a more complete understanding of the research problem (Glanz, 2003).

RESEARCH IN THE MIDDLE GRADES

Hough (2003) identified 3, 717 published studies related to middle grades education that met the definition of research—original work that reports the methods and findings from systematic collection and analysis of empirical data. These studies were disseminated from 1991 to 2001 through publication in the Educational Resources Information Center (ERIC) and Dissertation Research as well as

presentation at the American Educational Research Association and the National Middle School Association conferences. Hough reported that action research accounted for 19.2% of the middle grades research studies. Since Hough's study of studies, the publication of action research studies with a middle grades focus has continued as evidenced by more than 50 studies in ERIC and 100 studies in Dissertation Abstracts, respectively. (Data concerning the dissemination of action research studies at conferences was not examined for this article.) Additionally, middle grades action research studies appeared in electronic journals (e.g., *AR Expeditions*) and number of edited volumes (Caskey, 2005; Meyers & Rust, 2003; Wells, 2001).

Certainly, action research holds an important and enduring position in the field of middle grades education. To gain a fuller appreciation of its value and illustrate its use, consider the following two exemplars:

- (1) Catelli, L. A. (2000). Action research to effect change for adolescent girls at an urban middle school: A matter of life and death. *Research in Middle Level Education Annual*, 23, 133-148.
- (2) Sanguras, L. Y. (2005). Effects of adolescents' perceived motivators on academic achievement and self-efficacy. In M. M. Caskey (Ed.), *Making a difference: Action research in middle level education* (pp.17-39). Greenwich, CT: Information Age Publishing.

The first study exemplifies a sustained collaborative action research project, while the second study highlights an individual middle school teacher's classroom-based research.

Catelli (2000) conducted an extensive collaborative action research study to examine health-related fitness and implement a strategic model to initiate positive change for adolescent girls at an urban middle school. The four-year study was a partnership among university faculty and middle school teachers. Their review of the research showed that inactivity coupled with lower health-related fitness (e.g., endurance, muscular strength) in the early years of life contributed to coronary heart disease in later life for women. Plus, girls were more likely to experience gender-biased practices in school programs including physical education, health, and athletics. Using the Physical Best battery of tests, data were gathered and analyzed data in the fall and spring of each year to assess change in the health-fitness scores of girls (N = 36) and boys (N = 32) from fifth through the eighth grade. A strategic intervention model was implemented to eliminate gender-biased practices, modify instructional practice, and change curriculum in order to promote equity for girls and a quality fitness program for all students. Results of the action research study indicated that the intervention did effect substantial change in school policy, instructional practices, and curriculum content for girls.

Sanguras (2005), a language arts teacher, investigated the effects of extrinsic motivation on the academic performance of her seventh grade students (N=25). Her interest in student motivation and academic achievement emerged from her own teaching experiences. To expand her understanding, Sanguras reviewed the research on motivation, academic achievement, and self-efficacy. She learned that improved levels of self-efficacy were associated with increased levels of motivation. To determine the outcome of specific extrinsic motivators—qualitative teacher praise, grades, and incentives on her students' vocabulary achievement and self-efficacy, Sanguras divided her study into three phases. At the beginning and end of each phase, she collected student data from teacher-made vocabulary tests and surveys. Results of the action research study showed student performance improved when associated with teacher praise and declined when coupled with grades; findings about the use of incentives were inconclusive. With regard to self-efficacy, the data indicated a discrepancy between students' achievement and their perceived motivators. Her study exemplifies how action researchers can conduct methodical research. Similar to other action researchers, Sanguras designed, implemented, and evaluated her study to fulfill the requirements of a Masters degree. What sets her apart from other action researchers was her willingness to develop and submit a manuscript for publication.

Academics and practitioners are using action research to advance excellence in middle grades education. Analogous to the aforementioned studies, educators employ a full range of approaches to action research from individual classroom explorations to comprehensive school improvement investigations aimed at middle - grades reform (see Caskey, 2005). Academics are working in partnership with novice and veteran teachers to implement and evaluate action research studies. Together they facilitate action research school-based symposia and/or regional conferences where middle grades researchers disseminate their findings.

RECOMMENDATIONS

With regard to research, ethicists and research academics offer a number of ways to improve the circumstances of action research. Pritchard (2002) identifies ways to address the informed consent issues. First, action researchers need to become conversant with the requirements of Institutional Review Boards and local school districts. Second, university faculty need to increase the emphasis on research ethics, especially informed consent issues, in their research courses. Third, research ethics need to be part of K-12 science education to meet established national standards, which would allow students to "become part of a well-educated public aware of ethical issues in research" (p.

10.) Additionally, practitioners and academics alike must acquire the skills to assess the quality of action research studies. To evaluate action research studies, consider the quality and adequacy of each of the following components: (1) the research problem or issue, (2) the use of the literature, (3) a logical plan of action, (4) the types and procedures of data collection, (5) the types and procedures of data analysis, (6) the identified changes or solutions, and (7) the overall reporting structure (adapted from Creswell, 2005; Mills, 2000).

Teachers must possess the requisite knowledge and have additional time as well as support to conduct action research studies. Anderson and Herr (1999) warn, "We should not, of course, underestimate the restrictive workplace conditions and lack of reward systems for teachers to engage in and disseminate their research" (p. 14). School districts need to provide practitioners teachers with professional development, support, and tools to design, conduct, and evaluate action research. Individual teacher researchers deserve time to plan, act, and reflect upon their actions. Collaborative teams also require time for regular meetings to collaborate on action research projects and share their classroom research. As action researchers, teachers may require additional resources to support their inquiries. School administrators need to promote research efforts that systematically examine how students are doing and help teachers to develop strategies for improving student performance (National Commission on Teaching and America's Future, 1996). When used in this manner, action research has the potential to result in teacher and school renewal (Calhoun, 1994).

Action research can also be strengthened through the formation of partnerships among schools and higher education institutions. A collaborative school-university partnership can host forums for research groups and support site-based research on issues of immediate concern to the school. Middle schools, for example, often have organization structures (e.g., small learning communities) that allow professional development to be an ongoing part of teachers' work through collaborative planning. These collaborations readily extend to research, curriculum and assessment work, study groups, and peer coaching (National Commission on Teaching and America's Future, 1996). Using a site-based collaborative approach, action research becomes a natural and integral part of the partnership.

FINAL THOUGHTS

Middle grades education needs additional research to enlarge the existing knowledge base. Anfara, Andrews, Hough, Mertens, Mizelle, and White (2003) recommend more large-scale, longitudinal studies; studies that combine quantitative and qualitative methodologies; more studies that replicate previous methods and

designs; more experimental studies; and the development of a national middle grades database.

Though not cited specifically, action research studies can continue to add to the middle grades research base. Notably, action research has the potential to capitalize on the strengths of quantitative and qualitative research. Reasons for combining these research methodologies include (1) superior triangulation of data sources, and (2) clarification of results. The contextual nature of qualitative findings can help to explain quantitative findings. Furthermore, middle grades researchers (Anfara et al, 2003) call for research studies that combine quantitative and qualitative methodologies among their recommendations for future research.

Teachers possess keen insight into their own context-specific professional practice. As researchers, they are closest to the issues and problems that arise in their classroom and schools. They are uniquely and appropriately positioned to act (intervene), to study (inquiry) and to consider (reflect) on the effects of their actions. Teachers' systematic, purposeful, and thoughtful inquiries into classroom and school issues can enhance the research literature in the field of middle grades education.

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RECOMMENDED RESOURCES

For additional information about action research, the author recommends the following set of resources—print and electronic—to supplement the books and articles referenced in this article. The print resources include books and journals; the electronic resources consist of electronic journals, networks, professional organizations, and websites.

Selected print resources:

- Action Research*. (2003-). Thousand Oaks, CA: Sage. [Journal]
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Selected Electronic Resources:

- AR Expeditions
<http://arexpeditions.montana.edu/index.php>
- Action Research International
<http://www.scu.edu.au/schools/gcm/ar/ari/arihome.html>
- ActionResearch.net
<http://www.bath.ac.uk/~edsajw>
- Action Research Special Interest Group
<http://coe.westga.edu/arsig>
- Center for Action Research in Professional Practice
<http://www.bath.ac.uk/carpp/carpp.htm>
- Collaborative Action Research Network (CARN)
<http://www.did.stu.mmu.ac.uk/carn>
- Cornell Participatory Action Research Network
<http://www.einaudi.cornell.edu/cparn>
- Jean McNiff.com
<http://www.jeanmcniff.com>

The Ontario Action Researcher

<http://www.nipissingu.ca/oar>

PARnet

<http://www.parnet.org>

Self-Study Special Interest Group

<http://www.ku.edu/~sstep>

Teacher as Researcher Special Interest Group

<http://www.teacherasresearcher.org>

Teacher Inquiry Communities Network (TIC)

<http://www.writingproject.org/cs/nwpp/print/nwppn/4>