Geoffrey Mills, Southern Oregon University, defines “action research” for teachers as “any systematic inquiry conducted by teacher researchers [including library media specialists], principals, school counselors, or other stakeholders in the teaching/learning environment, to gather information about ways that 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 improving student outcomes and the lives of those involved.” (2006, 6)

Authors of the action research guides referenced for this article consistently note that the key elements for this evaluative process include the following:

- Action research is conducted by teachers for their own purposes and includes steps to identify meaningful questions based on a manageable focus.
- The collection of data locally involves using a relevant, valid method, and analysis and interpretation of data in an unbiased manner.
- A plan for developing, presenting, and enacting local action is based on the findings.

The purpose of this article is to present the opportunities and limitations of action research, to differentiate it from pure research and to show that standard practices of rigor and ethics must be followed so that the results of such local inquiry on teacher and student practices can be reasonably accepted to have merit and validity. Specific steps and various methods are not detailed here, but these are outlined in understandable terms in the publications referenced. Lesley Farmer from California State University, Long Beach, for example, has written a useful guide to action research (2006). Her book gives some reasonable guidelines for gaining focus, reviewing theory, posing workable research questions, collecting and analyzing data, and communicating results.

Action research is more than just learning the correct steps to implement systematic evaluation, and, when practiced properly and in collaborative fashion, can enhance both teacher and administrator attitudes for progress and reform as well as lead to a democratic approach for decision-making. The result can be more educators with a greater understanding of their role and knowledge of how to implement effective strategies for instruction and learner environment management. Action research is not, however, the “silver bullet” for immediate increased funding for public education nor can it magically raise student standardized test scores.

The Myths of Action Research

Even though articles on action research in most edited publications respect the standard research process, this author has observed numerous conference presentations and local workshops where action research is falsely presented. It is presented as a manageable short-cut to discovery of new insights that will dramatically change education, place library media programs at the forefront of curriculum design, and lead to such high degrees of respect that additional funding is certain to follow. Realistically, knowledge of how to conduct systematic evaluation, under the descriptor action “research,” can help the dedicated educator address some specific local problems and gain greater respect for the multitude of factors that lead to
quality delivery of instruction.

Myth 1: The critical issues facing education today and, specifically, those that limit my own classroom or library media center operation can be solved through action research. If I think about some of these issues and try some obvious steps for this year compared to last year, that should be sufficient.

Action research is intended to examine local practices and problems, although these may find grounding in common national issues as well. A first step in determining an action research plan is to select a focus for the study. Criteria for selecting an area of focus include the following (Creswell 2002; Mertler 2006):

- The area of focus should involve teaching and learning and should focus on your own practice.
- The area of focus is something within your locus of control.
- The area of focus is something you feel passionate about.
- The area of focus is something you would and can change or improve.

Within the plan for action, the teacher researcher should be able to:

- Describe the situation to change or improve.
- Describe the evidence currently held that shows there is a problem.
- Identify the critical factors that seem to affect the problem locally.

Specific learning objectives and specific teaching techniques should be tested and measured locally (Callison 1984). Within this plan for action, a control group should be established and monitored along with the new groups that receive the new service, resources, or techniques. Differences can be measured through qualitative and quantitative means. Sufficient, if not significant, differences may be justified if the new techniques achieve greater motivation, increased appreciation and understanding, and greater degrees of student performance in terms of efficient and effective learning. Clear or significant differences may come over time with adjustments made from the observations of each trial application.

Two excellent examples of how adjustments of relatively inexpensive actions—more time devoted for students to read and more choice provided for students to select from motivating and relevant materials—demonstrate how students increased their commitment to reading and improved their comprehension over several semesters. Carol Tureski, a high school language arts teacher in Brooklyn, kept student reading logs, questionnaires, and surveys to show such advancements (2003). Leslie Preddy, an Indianapolis library media specialist in collaboration with her middle school teachers, demonstrated how Sustained Silent Reading, as a program practiced consistently over time, can be a respected factor in raising student reading scores (2007).

Myth 2: My academic experience and my professional practice are enough to identify the context and relevance of local instructional and learner environment problems I face. This is not a “dissertation” and, therefore, there is no need for a literature review.

Even though gathering information from the professional literature may not need to be as comprehensive as required for doctoral studies, reading articles and studies relevant to the issues to be investigated helps to inform the teacher researcher and set a context for the local evaluation as well as focus the task. It may be, for example, that after a review of the literature, the teacher researcher is satisfied that some questions have been adequately answered from the documented work of others. That helps the teacher researcher to then focus on the questions that need to be addressed locally. Evidence from other studies also serves to broaden the view of the teacher researcher as he or she needs to be as unbiased as possible. Bias is not an easy behavior to manage when dealing with local problems within one’s personal classroom.

Literature reviews take various forms and should include the following basic practices:

- Read the full study and not simply an abstract or set of conclusions. (Practice what we preach and expect of students.) Know about the situation, methods, and discussion of findings as these all help, especially if you are a novice in action research. Never accept conclusions on “face value,” but question validity based on other studies.
- Think of “literature” broadly. Presentations at conferences, discussions with colleagues and local academic experts (Gordon 2006), and even reading in popular trade literature will help to form impressions and focus the research questions. Keep in mind, however, that trade journals are often not a source of articles that have had extensive peer-review
and examination by multiple experts prior to final publication. Conference presentations that allow for audience discussion and panel reaction tend to provide wider perspectives on the papers. Internet discussion forums may also help to find documented previous debate on issues as well as allowing the teacher researcher to engage in advancing additional discussions (Lankshear and Knobel 2004).

- Literature reviews do take time, as does quality action research. Initial gathering of information and one completed local study do not make for a case in which substantial findings can be justified. Action research is a work in progress, and application of first findings should lead to further review of the literature and additional local studies. Action research is most valuable when conducted over time, findings are compared from year to year and group to group, and the teacher researcher matures in his or her abilities to remove minor findings and eventually focus on those that are truly meaningful for effective local change and better achievement by both the teachers and the students.

**Myth 3: There must be some way to gather information I need without gathering quantitative data or to gather such on a very limited basis because I do not understand statistical analysis. I can find answers from testimony if it comes from those most influential in the local educational ranks or if I just gather enough of it from as many stakeholders as possible.**

Gathering data in both qualitative and quantitative forms and from three or more independent sources helps to build a case that those observations, inferences, and conclusions are based on a "triangulation" of data. Richard Sager illustrated this process in his book for the Association for Supervision and Curriculum Development by showing how multiple sets of data help to build the case for the quality status of a school (2000). Data are extracted from such sources as the following to substantiate or valid other data. Some data come from outside institutions and other data are gathered locally. These may include:

- Surveys of teachers, students, and parents;
- SAT and other test scores;
- Post-school placements for college admissions or other post-secondary follow-ups; and
- Drop-out and retention rates.

Cher Hendricks illustrates how validity of multiple sources is enhanced through various group conversations designed to confirm or elaborate on the teacher researcher’s interpretations:

A media specialist studying the Accelerated Reader (AR) program collects data that includes teacher interviews, observations of students, student interviews, computer-generated test reports. After analyzing the student observations and student interviews, the teacher researcher discusses his interpretations of his data with a randomly (independently determined sample of the larger group to conserve on time and yet represent the whole population) selected group of students, asking them if they believe his interpretations or their attitudes about AR are correct. He also conducts a focus group interview with teachers to discuss their views on his interpretations of student observations, student interviews, and teacher observations. The media specialist incorporates student and teacher feedback in his results and conclusions (2006, 103). Statistical data can be critical, but in many cases simple descriptive data is sufficient. The teacher researcher can find additional colleagues or mentors to assist with selection of appropriate statistical methods and analysis when needed. A temptation is to claim cause and effect based on “significant” correlation findings when such is not possible to claim. High correlations of +.50 or stronger and low correlations of -.50 and stronger may be sufficient to indicate that certain factors are or are not adequate predictors of other conditions. Experimental testing is necessary to see if cause and effect can be claimed. Scatter plots help to visualize correlations as many relationships will generate seemingly significant numbers, but when the data are viewed across a scatter plot, it is obvious that many other factors are causing the data to spread out without a meaningful linear progression or regression (Lankshear and Knobel 2004).

Most statisticians remind teacher researchers to be careful about claims, and how one interprets descriptive statistics especially (Mills 2000). For example, the teacher researcher should be clear about the limited significance that can be attached to averages and standard deviations. Local action research should not be generalized to larger populations. 
Myth 4: There is no need to formalize my findings for publication as my problems are local and I have no desire to impress other educators. Writing a technical report is time-consuming with little if any possibility of additional insights to address my problems.

The time and effort in conducting action research culminates effectively when the teacher researcher, along with mentors and colleagues, synthesize findings to analyze and articulate in terms of taking actions for change. Such written reports are intrinsically beneficial for the researchers involved and can provide a communication tool to other teachers in the same building or district. Local impact is likely to be the most dramatic and exciting, although some researchers do modify their reports for formal presentations to school boards and even professional conferences.

Mary Louise Holly, Joanne Arhar, and Wendy Kasten (2005) from Kent State have established an outline for traditional reporting of action research that includes:

- Abstract (50-100 words)
- Introduction (1 page)
- Review of Literature (3-5 pages)
- Design and methodology (3-5 pages)
- Changes (3-5 pages)
- Results (4-8 pages)
- Reflections (1-3 pages)
- References (1 page)
- Appendices

Myth 5: Action research should prove my value and worth as it relates to the impact on student learning. It is more important for others to see what I do right than for me to find ways to improve.

Many teacher researchers, including library media specialists, struggle with action research because they attempt to use methods to gather data that show how effective they are in teaching or managing resources, thus implying a positive effect on student learning. They look for data that "prove their impact" when they should be looking for and considering data, feedback, and impressions that show how they can take actions to improve. To move in the direction of self-reflection and ultimately gain stature as a contributing educator, the teacher researcher must take steps to listen for critical review, make reasonable adjustments in methods, and use unbiased interpretation of findings that can be further validated by colleagues.

State-level school media "impact" studies have fallen short in several aspects. Modest correlations that indicate minor impact on student achievement, at best, have led some to believe that the "data is with them" and that school library media services as typically provided in today's schools are sufficient. In reality, few studies in school library media over the past ten years have served to show how local actions through the library media center serve to improve teaching and learning. New teaching roles have been defined for the library media specialist as a guide, mentor, and educator to teach methods for quality and meaningful selection of materials and application of information to meet academic needs. Local action research is likely to play a more important role in providing such convincing evidence rather than analysis of broad characteristics of school library facilities and staff to narrow one-time snapshots of student achievement measured only on standardized tests (Lance and Callison 2005).

References


