Unpacking the Action Research Process
M.Ed. Three Step Action Research Cycle

Introduction

Action Research is a messy, often nonlinear journey down the path to meaningful change. The concepts that follow serve only as tools to help you focus your thinking as you go about your inquiry work. The ideas addressed here should not be viewed as a recipe for bringing about change. Instead, think of concepts discussed today as a toolbox of ideas complimenting what you are already doing. Used intentionally, ideas we work with today do hold promise for adding focus, meaning, and usefulness to your inquiry.

Defining Action Research

Action research is systematic inquiry for the purpose of developing the quality of life and learning of a community.

Action Research is...
- people understanding people
- people understanding contexts and circumstances of life in "community"
- people empowering people
- people giving voice to people
- a journey
- inquiry with a life of its own
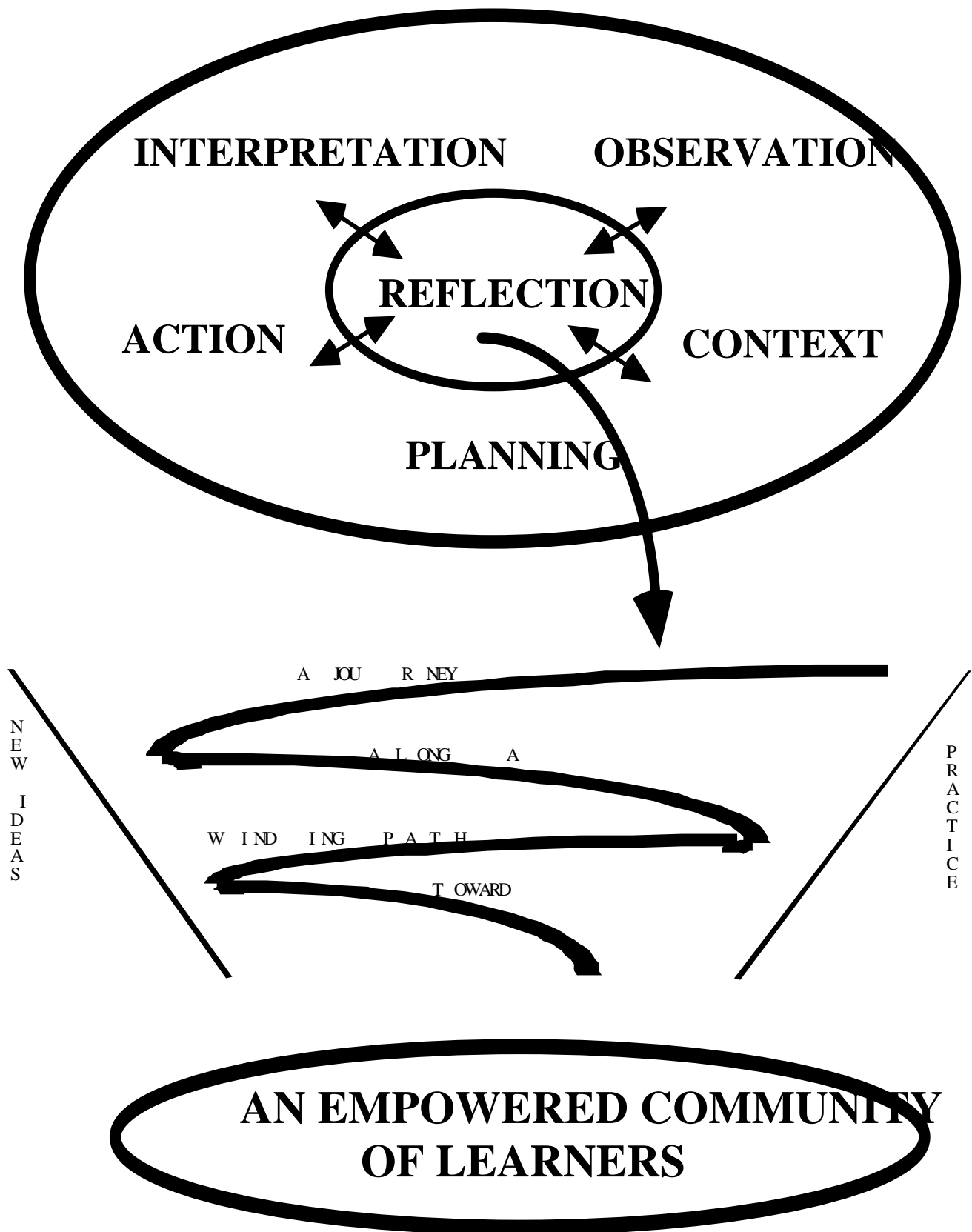- exposing that which is present but hidden

Action Research is not...
- the creation of universal principles
- validation of generalizations
- one size fits all

Purposes of Action Research

Action research serves as a learning tool to...
- build the capacity of a community and its members to act purposefully and meet challenges
- facilitate deeper understanding of persons and the contexts in which they live
- create shared knowledge to enhance democratic qualities of community life

The Dynamics of Action Research

INTERPRETATION   OBSERVATION

REFLECTION

ACTION   CONTEXT

PLANNING

A JOURNEY

ALONG A

NEW IDEAS

WINDING PATH

PRACTICE

TOWARD

AN EMPOWERED COMMUNITY OF LEARNERS

ACTION RESEARCH CYCLE

SENSED DIFFERENCE BETWEEN REAL AND IDEAL

⬇

FORMULATING A PROBLEM, QUESTIONS

⬇

RESARCHING & WRITING ABOUT THE AREA OF NEED

⬇

IDENTIFYING ASSESSMENTS AND CREATING AN IMPLEMENTATION A PLAN

⬇

COLLECTING & ANALYZING DATA

⬇

DRAWING CONCLUSIONS AND IMPLICATIONS

⬇

REFLECTING ON NEW KNOWELDGE

⬇

SENSING THE NEW NEED

Step 1: THE PROBLEM
SENSING THE REAL, VISIONING THE IDEAL, ASKING QUESTIONS THAT FRAME A PROBLEM

1.1 A **general problem description** presents a current issue. The statement should describe a desired change related to a specific aspect of the teaching and learning process. The description should be a purposeful description of a need for a clearer understanding or solution tide to specific practice(s) and grounded in a researchable concept.

Abbreviated Example: Currently learners have difficulty staying on task and cooperating when doing group work. Students appear not to have the self-discipline to treat each other respectfully. They also appear to need strategies for problem-solving as a team to learn content effectively. Finally, they do not appear to have ways to celebrate one another's contributions and incorporate individual differences into the learning process. Instead, conflicts over learning styles, self-regulation of individual responsibilities, and managing of differences within the group require significant teacher monitoring and assistance.

1.2 A **context description** presents the characteristics of the relevant persons and places and how are they involved in my situation. It presents the relevant demographic and situational information needed to understand the dynamics and challenges of the problem to be described.

Abbreviated Example: I currently teach mathematics in a departmentalized 6th grade classroom. My classes are made up of approximately equal numbers of males and females. The school has a large number of students, approximately 50%, on free and reduced lunches. We have a significant, approximately 15%, minority immigrant population of Hispanic and Asian descent. My school is currently transitioning to a Middle School model and is attempting to develop ways to build supportive environments for learners to explore the world of ideas connected to life work and to help them find positive ways to build friendships through cooperative academic work. Many teachers are finding this a difficult transition toward Advising Groups, Homerooms, and emphasizing active group learning. Learners seem to need more developed and well-defined boundaries and norms to help them cross cultural borders in forming friendships and understand this new work environment.

1.3 A **research question** is created by examining the general problem statement for its relationship to specific teaching and learning practices.

Example: How does building learner social cognitive knowledge for collaboration and problem solving into the learning process impact cooperative learning group on task behavior and successful group self-regulation?

1.4 **My Hope/My Vision** Describes desired differences in specific values, qualities of actions, relationships, knowledge or understandings as a result of my action research in actualizing my inner life principles and ideals for my classroom.

Example: I want to create a process that helps students learn how to treat each other respectfully, problem-solve as a team to learn content effectively, celebrate differences, and manage conflicts successfully with minimal teacher assistance.

Action Research Step 1: The Problem

1.1 Write a general problem description that encompasses the current problem explaining your specific situation/context and the need for a clearer understanding or solution. The problem description should be tied to specific teaching practice(s) and grounded in a researchable concept.

1.2 A context description presents the characteristics of the relevant persons and places and how are they involved in my situation. It presents the relevant demographic and situational information needed to understand the dynamics and challenges of the problem to be described.

1.3 Write a research question. The question should be specific, concrete, and lend itself to direct and observable problem solving action. It should imply direction for a solution or improvement in quality of understanding or action for a specific situation/context; It should be linkable to specific teaching practice(s) and grounded in a researchable concept.

1.4 Write a vision of how you want your classroom teaching/learning to be different in a way that actualizes your values, principles guiding your "ideal classroom".

STEP 2: THINKING THROUGH RELEVANT RESEARCH LITERATURE

Using the electronic database ProQuest, ERIC, EBSCO, or other sources, find and read articles or book chapters that can inform your exploration of the area of change you are focusing on this month. Check out books from the community library that have relevance to your question. Check out books from the community library you think will also serve as a resource. Read these books and articles. Begin a Review of Literature by word processing annotated bibliographies of your readings using the guidelines listed below. Keep updating your review by adding to it and bring it to our monthly weekend meetings.

Note Taking: Annotating Individual Readings from Professional Literature:

When you read an article or book, word process a summary of the ideas using the following format:

The Citation

Where did this information come from? Provide in APA style… Author [last name, first initial]. Year. Title [chapter or article]. Name of Resource [journal, book, other], volume. Publisher info [publishing location, company name].

The Research

- Identify the **major themes(s), ideas that describe and explain the meaning of the critical concept(s) and relationships among the concepts** identified in the research.
- Note what this research might be **useful** for. Does it give **examples** of something being implemented successfully? What methods, strategies or new ways of approaching teaching does it provide? What **perspective** does it bring to the explanation or description of issue? Does it provide good ideas for future use?)

Your Personal Connection to the Research

- Note how your **values and principles** relate to the research.
- Note how the research might **impact your personal** teaching practices.
- Identify **questions** this research may have generated for you.

[SEE EXAMPLE ANOTATION BELOW]

Thinking with Educational Research: Writing a Review of the Literature

2.1 Identifying the Relevant Conceptual Knowledge Base - What major and supporting concepts from the research literature are central to my problem and question?

- ☢ Make a list of the 5-10 key concepts/terms you have gathered in your research

2.2 Concept Meanings and Relationships- What do these concepts mean and how are they related to each other?

- ☢ Create a concept map including the concepts in circles on the map. On it…

    -Identify in the circle a statement describing the meaning of the concept using ideas central to the concept. Also, list examples that illustrate the concept in practice.

    -Identify on the lines between each circle how each concept fits with others in helping us understand the topic or problem you are working on in your classroom.

2.3 Write an <u>introduction</u> to the review of literature using the concept map to identify the meanings and relevance of the concepts/issues you have researched and how they relate to one another in the context of your problem question.

2.4 Develop the <u>body</u> of your review of literature attending to the relationships/connections and patterns among the concepts in ways identified below.

- ☢ **Perspective-taking-** How have varied researchers interpreted these core concepts in relationship to the problem area I am researching? In the body of your review of literature, develop the concepts you have studied by elaborating on how different research and researchers have approached the concepts in their own research.

- ☢ **Applications-to-Practice-** How successfully have the concepts central to this problem been translated into practices related to the changes I am seeking to make? In the body of your review of literature, explain how researchers have taken the concepts and developed strategies, methods, or practices relevant to your problem.

- ☢ **Innovating and Integrating Concepts with My Principles and My Context-** How am I adapting these research-based concepts? How am I translating researched techniques into strategies that promote my principles in my "ideal classroom" practice to solve or better understand the problem in my own situation? In the body of your review of literature, adapt or translate strategies into your own practice. Explain what and how you hope to accomplish principles of practice in bringing about your ideal classroom.

2.5 In <u>closing</u> your review of literature, explain why you see this research as important to who you are trying to become as a teacher leader and your hopes your learners.

**[SEE EXAMPLE REVIEW OF LITERATURE:
INTRODUCTION, BODY AND CLOSING IN APPENDIX A]**

STEP 3: PLANNING AND IMPLEMENTING

Action Research Task 3A: The Plan

My Plan of Action

What sequence of specific actions will I take to answer my question? How will they unfold over time?

3A.1 Create a calendar identifying the dates and notes to guide your creation and implementation of the following:

Procedures and Guiding Notes	Date	Date	Date	Date	Date	Date	Date	Date
Creation of Materials to be Implemented								
Implementation Schedule of Materials								
Creation of Data Collection Instruments								
Data Collection Points by Instrument								
Data Analysis Points by Instrument								
Reflection/Plan Modification Points								
Results Write up								

Action Research Task 3B: Data Collection

My Collection of Data

What data collection tools am I using and what does each need to tell me to answer my question?

3B.1 All planned change needs to begin with the end in mind. From the problem description, desired ideal classroom outcome, and research question should come the indicators and type of assessments/data that will be used to determine if the desired outcome is being achieved. Identify qualities in performance that can serve as indicators of the desired change for each question you are researching.

Example: How does building learner social cognitive knowledge for collaboration and problem solving into the learning process impact cooperative learning group on task behavior and successful group self-regulation?

Indicators of Change: 1) changes in team member attitudes toward each other 2) changes in willingness to make and follow through on commitments to each other as team members

3B.2 Identify methods for assessing performance and collecting data in a systematic manner. Triangulation, the collecting and comparing a number of different types of data can help enrich and strengthen confidence in your findings. Use your planning calendar matrix identifying when, where, and how data will be collected through varied forms of assessments/data collection instruments you create.

Sample Assessment Formats as Data Collection Tools

Narrative- reflective journals, learning logs, field notes, biographical writings, autobiographical writing, oral history, interviews

Student Work Samples- assessments of student learning

Physical Artifacts- minutes, letters, memos, lesson plans, instructional activities, memos, video/audio tapes, multimedia, artistic and graphic representations, student work

Observations-participant, researcher

Scales- surveys, questionnaires, rubrics

Checklists- assessment lists, behavior checklists

3B.3 Utilize assessments embedded in your normal instruction process to collect data. Identify hwere and when you can collect the data in your daily routine. Consider how others have reported in the research literature classroom assessments to collect relevant data.

Examples of Data Collection Around a Question

Data Collection Possibilities Using Assessments You Create:

Collect peer evaluations of cooperative learning team members at the end of each day.

Collect discussion logs of students outlining how the group came to team decisions.

Do group observations using a checklist of behavioral indicators.

Videotape- teams will videotape each other and tapes will be examined by the team and the teacher for evidence/indicators of mutual respect, help, and commitment to each other's learning.

Interviews- the teacher will interview individual team members using questions such as "How has your team changed since you started using team building activities each time you work together?"

Observation Rating Scales- teams will be asked to create and use rating scales. Teacher colleagues will be asked to periodically observe teams in action using a scale rating the team's interactions reflecting mutual help, respect, and demonstrations of commitment to each other's learning.

Action Research Task 3B: Data Collection cont.

Identify several assessment/data collection formats you could use to assess your progress on your problem/question/ideal classroom outcome.

3B.1 What types of assessments will collect the type of data, indicators of change, needed to answer my question?

3B.2 Explain the types of assessments you are using to collect data and why you believe they will provided you with the types of information needed to tell you if your changes are having an impact on your learners.

3.3 What types of assessment instruments could you use to get several forms of feedback/data that would align with the types of performances you need to see as indicators of successfully answering your question? How can I use or create assessments to collect data that are part of the normal assessment process in learning? Does the research literature provide types of assessments others have used?

STEP 3C: DATA ANALYSIS

My Data Analysis Process
What quantitative or qualitative manipulation of my data do my collection tools require?

The purpose of data analysis is to uncover the story in the data. Prior to gathering and analyzing your data, consider how to make data analysis efficient. Data analysis needs to follow a systematic process.

For qualitative data… 1) Assemble all the data 2) skim the data for themes 3) create categorical names for themes 4) Reread the data placing codes beside information belonging in each category 5) Create an *evidence type* by *data category* matrix 6) copy and transfer ideas/comments/information from the raw data into the appropriate category on the matrix using colored sticky notes 7) examine the entire matrix and make statements summarizing the data within the categories 8) interpret the meaning of the findings in a separate section, drawing conclusions about what the data is revealing and discussing implications for future research and changes in teaching practices.

For quantitative data…1) Summarize scores for each data set using appropriate descriptive statistics such as mean, median, mode, range percentages or percentiles 2) create tables, charts, or graphs displaying the results of your analysis 3) write a description of what is located on the chart, table etc. 4) interpret the meaning of the findings in a separate section, drawing conclusions about what the data is revealing and discussing implications for future research and changes in teaching practices.

Action Research Task 3C: Data Analysis

What kind of data is produced by the data collection/assessment instruments am I using? Will this require qualitative data analysis or quantitative, or both? How do I intend to summarize and display the results of my data analysis?

3C.1 Describe the assessment/data collection instruments and the types of data produced by the instruments you are using (include samples).

3C.2 Describe the processes/procedure(s) you will be using for analyzing the various types of data.

STEP 3D: REPORTING RESULTS

Reporting My Results

What does the data look like? How am I organizing, summarizing, and communicating the data? What picture of the problem or change is present? What limitations to understanding the problem are present with the data I collected?

In order for you and any user of your research to make sense of your data, you needed to organize it in a way reveals what the data, in sum, looks like? Summary displays of the results, including data categories, and commonalities and divergences in the data that emerge from analyzing the data.   What limitations are present with the data I collected?

Example:

Task 3D: Reporting Results

3D.1 What will the summary displays of the results look like/include to show the categories, commonalities, and divergences that emerge from analyzing data?

3D.2 Graphically display organize by theme the convergences and divergences in the quantitative data and/or qualitative data.

3D.3 Explain in a narrative what the reader is seeing in the relationships among the data in the graphic display or qualitative themes.

STEP 3E: CONCLUSIONS AND IMPLICATIONS

My Conclusions and Their Implications for My Practice

What are my data results to my question telling me about what is going on in my classroom? What do my conclusions about what is going on mean for future teaching, next questions that need investigating, understanding about best practices in teaching?

The purpose of writing conclusions and implications is to think through the meaning of what you have done in your research. What is my close observation, journaling, data collection, and data analysis telling me about how the changes I have made are impacting my learners behaviors and achievement? What is it telling me about the way I go about my instruction, framing of content, classroom environment, and assessment of my students? Writing this section should also include a look to the future. What are the implications for future steps, actions, modifications, and additional research related to my vision and improvements I want to see in my progress toward my IDEAL Classroom?

Action Research Task 3E: Conclusions and Implications

3E.1 What are specific relationships and patterns emerging in your data analysis and reflection telling you about how the change you made is impacting desired changes you are seeking?

3E.2 What are your results telling you about the concepts you are studying, and the relationships among concepts, how the strategies address the problem you are trying to understand? What strengths and limitations to these ideas did you discover through the implementation?

3E.3 How will your learning change your practices of instruction, assessment, environment, and understanding of content knowledge in your discipline?

3E.4 What implications for future practice are you drawing from the results of your inquiry, including how results are leading to new questions and future directions for research?

Ethical Considerations: Getting Permission

Prior to beginning your research, check your district's policy on data privacy. Generally, if you intend to share your results with an audience broader than your school you will need to get permission from the parent(s) or guardian of your students to participate in data collection and share artifacts such as slides, videotapes, portfolio work etc. In addition, you will need to fictionalize names of people and places in your work. This is a protection for student right to privacy assuring the confidentiality of student work.

Resources for Action Research

Calhoun, E. F. (1994). *How to use action research in the self-renewing school*. Alexandria, VA: ASCD.

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