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Turning Teachers into Action Researchers in their Classrooms


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Turning Teachers into Action Researchers in their Classrooms

Abstract

Action research is often called the teacher's research and often feels like a common sense approach to solving problems, but not all pre-service teachers begin careers knowing how to use this methodology to improve their own practice. This article offers a rationale for teaching pre-service teachers the skills and action research methodology as a tool for professional improvement based on the experiences of the authors engaging in a reflective process for teaching. While not generalizable, it is hoped that lessons learned may be applied by other faculty in teacher education programs.

Keywords

action inquiry, teacher action research, educational action research, classroom research, classroom action research, teacher researcher

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To support the learning of students with disabilities, teachers must adopt a practice of inquiry and analysis. When teachers engage in an action research process that highlights inquiry and analysis, they create potential to improve teaching, solve problems, and create success for students and teachers (Reason & Bradbury, 2001). In Kentucky, teachers are expected to use Response to Intervention and research based practices to support student learning (Kentucky Department of Education, 2012). The Kentucky Commissioner of Education, Dr. Terry Holliday has said, “We are asking teachers to not only provide equity of access, but to also provide equity of outcomes” (KDE, 2012, p. 2).

In order for teacher candidates and practicing teachers to develop the skills needed to provide equity in both access and outcomes, they must develop a system of research within their own classrooms. An action research approach allows teachers to do this in a targeted way, investigating their own teaching practice and asking questions about what they do and how to improve that work as practitioners (McNiff & Whitehead, 2006). Yet, our special education teacher education program, like many others, is based on evidence based practices and traditional research methodology. Consequently, many candidates and teachers are not equipped with the skills needed to conduct this regular analysis of their teaching, and practicing teachers may not receive the support or training they need to begin conducting action research during their teaching.

Not all university students, teacher candidates, or practicing teachers returning for graduate degrees, can translate this work of inquiry and analysis into a framework for addressing a problem of learning to meet the needs of students with disabilities. In our teacher education program, like in many teacher education programs, both undergraduate and graduate students have typically received explicit instruction to address a question; they solve the question, and then submit their ideas to an instructor for a grade. Our university students and faculty are in the habit of offering and responding to a one-cycle framework for addressing inquiry. For many teacher education students, this framework looks like a four step process, as shown in Figure 1:

- 1) question or problem presented (either by an instructor or a problem arises in the practitioner-student’s classroom);
- 2) the teacher education student develops or implements a solution to the problem;
- 3) the teacher education student predicts or reflects on the solution; and
- 4) the university instructor offers an assessment of the student’s work submission for the proposed or implemented solution and a discussion or reflection of the solution.

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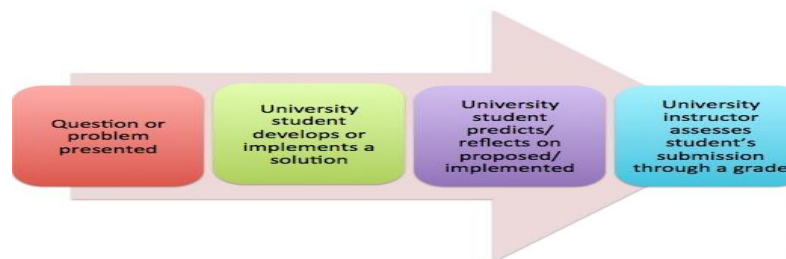


Figure 1: Traditional four-step process

While this process works well in the university and even P-12 system for instruction on topics, it lacks the robustness and depth necessary to create real change in practice or understanding through analysis as required by Kentucky state law and the intervention framework. One method for helping teacher candidates and practicing teachers to develop these skills is to teach in an explicit way how to use an action research framework for conducting classroom based research and problem-analysis.

Action Research Framework

A primary purpose of action research is to produce practical knowledge that is useful to people in the everyday conduct of their lives (Reason & Bradbury, 2001). Because a goal of action research is to join action and reflection with theory and practice in order to devise real-world solutions to problems that affect the participants (Reason & Bradbury, 2001), it offers a specific and practical methodology for affecting change in classrooms and education. Teachers or teacher candidates can address their own specific problems in ways that are preferable to them. Furthermore, those individuals affected by the changes are the ones evaluating the effectiveness of changes, which is rarely the case in a P-12 setting. Often in P-12 education settings, changes occur from the top down and are decided by agencies and individuals who will not be directly affected by those decisions. There is often little or no discussion about proposed changes with the teachers or students who will be most affected by change. Using action research in the classroom allows teachers to understand and address their own problems while developing the skills necessary to do so rather than relying on the intervention of experts to address their concerns (Brydon-Miller, 2002). That is, an action research framework for problem solving offers classroom teachers the opportunity to investigate and create solutions for the particular concerns they face by engaging in cycles of planning, acting, and reflecting, thereby creating change that is relevant and beneficial for them.

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An action inquiry cycle is the foundation of action research in the classroom; this cycle forms the framework for identifying, understanding, and solving problems in the classroom. For this pilot, we modified Dana, Thomas, and Boynton's (2011) Inquiry Cycle. This modified inquiry cycle shown in Figure 2 comprises the following steps:

1. Develop a question or identify a problem
2. Collect data
3. Analyze data
4. Take action
5. Share with others
6. Repeat steps 1-4
7. Share with others

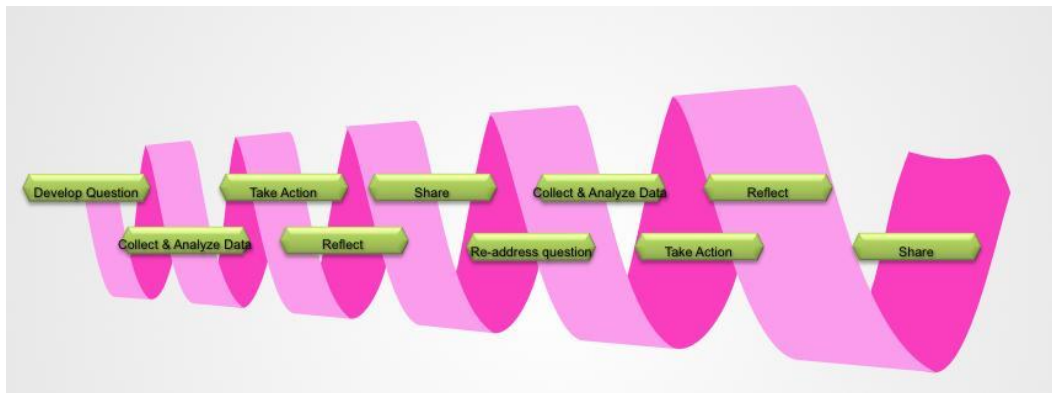


Figure 2: Action research inquiry cycle

Methodology and Findings

To support the development of required skills needed to become classroom researchers, we introduced teacher candidates to the Action Inquiry Cycle during their Applied Behavior Analysis and special education methods instruction. These courses were selected both because they offer opportunities to for students to engage in an action reflection process and because we teach these courses, simplifying the process for introducing the materials. Using case studies, we introduced teacher candidates to a P-12 student, along with academic, social, and behavioral information and data for this case student. Appendixes A and B are samples from two of the behavioral action research modules. Teacher candidates were encouraged to work like classroom researchers by beginning the iterative inquiry process and developing research questions by asking “I wonder” statements. Individually and in cooperative groups, they were asked to analyze the data presented, review research in the literature, and create possible action plans (steps one through three). After candidates selected evidence-based interventions

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appropriate for their case studies given the information presented, we shared a second set of behavioral or academic data. Teacher candidates reflected on if or how their interventions affected the student, based on the new data provided. They continued the action inquiry process by re-evaluating their “I wonder” statements and prepared for the next action cycle (either sharing findings or beginning the inquiry process again).

We introduced graduate students to the Action Inquiry Cycle during their three-course research sequence. During this year of study, students were required to develop a research proposal based on a current need for improvement in their practice or problem they identified in their own classroom, school, or district. Students worked closely with a research advisor over two semesters to develop their proposals designed to address a real problem in their settings so that they could complete at least one, and preferably more, iterations of the Action Inquiry Cycle in their implementation of their research projects.

In both the undergraduate and graduate courses, students needed explicit instruction and opportunities for practice with the Action Inquiry Cycle. To provide scaffolding for student learning in both the undergraduate and graduate levels, we developed instructor-created videos and a sample research proposal so that students could revisit the steps in identifying each of components of the action inquiry process. These videos were uploaded to YouTube for easy and continued access by students during their programs and when they enter their own classrooms. On the next page, Figure 3 provides our visualization to support conceptualization of the process.

Next Steps

After reviewing anecdotal student feedback and piloting teacher-created videos and conceptual models, we plan to continue our own action-reflection process in teaching students. This can serve as a model for our students. We also plan to develop additional course materials including video supports that students can use both during their course work and in their own classroom.

Implications for Practice

Both undergraduate and graduate students shared anecdotal feedback that the videos and visual flowcharts helped them better conceptualize the action research process and develop more authentic questions. Prior to the conceptual models, students said they struggled to move past the first stage of questioning and felt that there was little to no need to continue the iterative process. After

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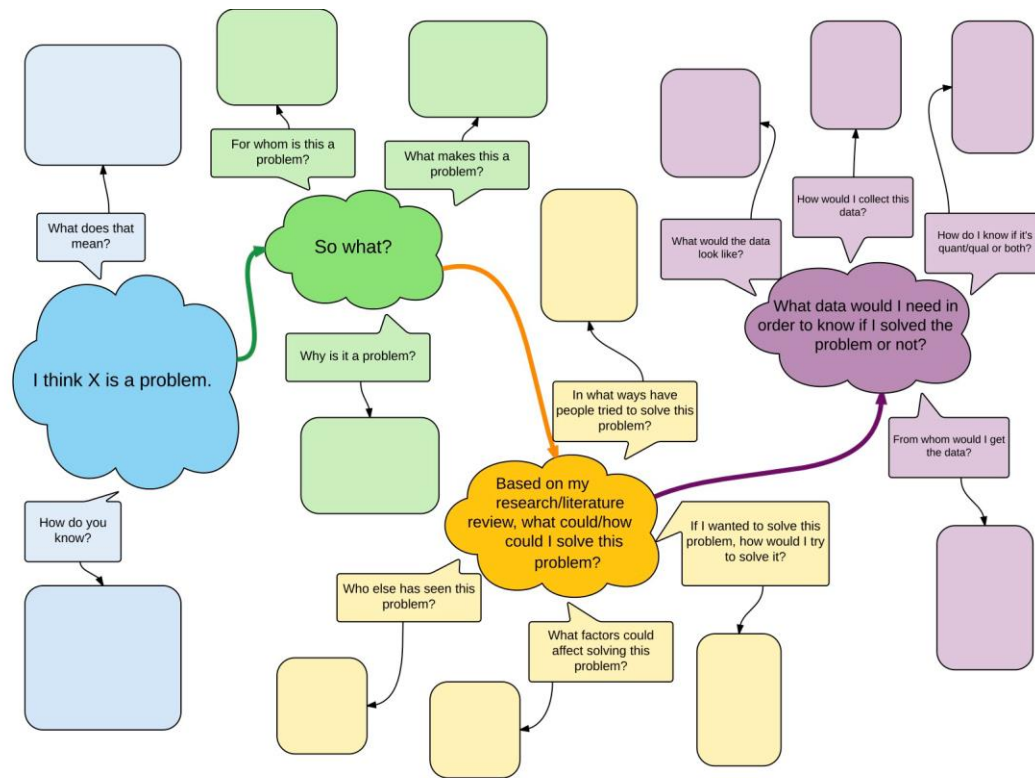


Figure 3. Visual model to support conceptual understanding of action research cycle. ©Dusty Columbia Embury, 2015

instruction in the Action Inquiry Cycle, students stated that they were able to understand the need to continue to wonder, develop action steps, and reflect on that action through continued wondering. Students further said they preferred to work through modules like in Appendixes A and B as they concretely demonstrated that there is not always “one right answer”, nor is there always an immediate cure/fix to challenging behavior or academic challenges. By engaging students in the Action Inquiry Cycle and providing opportunities to wonder and reflect as a group, students said they better understood the need to continue to use data and research-based strategies to move through the Action Inquiry Cycle and help improve student outcomes. When looking at implications for the field, it is crucial to provide students with more visual and conceptual models as well as video supports to allow them to review content. Other implications including increasing the opportunities for facilitated discussion through case studies and exemplars.

References

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Appendix A
 EKU SED 590 790
 Behavior Module B

We are hard at work supporting Samantha and her teacher, and are back for one more week to take baseline data. During the same time window, observe the following:

M-13
 T-18
 W-18
 R-19
 F-18

Your tasks:

1. Go to your Google Sheet.
2. Record the data. Note that when you are continuing to record data of the same type (in this case, you are continuing to record baseline data), you continue down the same column with no spaces between the data. See the example below for what this should look like.
3. Go to the Module Questions tab. Answer this question: Is the data that I have stable? How do I know? Do I still need to collect baseline data?

Upload your live Google sheets link into the Blackboard Module. Be sure your instructor can view your Google sheet :-)

Example of how data should look (these numbers are fake, just to give you an idea of what it should be):

Day/date	off-task behavior	
1 or you could write M for Monday, or 1/1/2015 for date	7	
2	8	
3	6	
4	5	

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Appendix B
EKU SED 590 790
Behavior Module I

Mr. Brecht and the team decided to return to baseline to see if the intervention was truly working.

Graph this data on your Google sheet and submit your updated graph in the assignment section in Bb.

M-12

T-15

W-16

T-17

F-17

On the Module Questions tab, respond to this prompt:

Should the team continue to collect baseline data or resume all/part of the intervention? Include your reasoning in your response.