BRANDON UNIVERSITY

RESEARCH CONNECTION

Inside the black box: Documenting decision-making in action research

By Cathryn Smith, Ph.D.

Why this research is important

Action research is a methodology which can be responsive to emergent problems as research methods can shift and evolve to better address the research question(s). To maintain the integrity of the research, all decisions must be informed by data analysis. Establishing systematic techniques repeated through each research cycle facilitates comparisons, detection of patterns, and shifts in the findings. Action research can be used to study and improve one's own practice. Educators use a particular branch of action research called practitioner inquiry to study one small aspect of teaching. I use a four-step action research cycle based on Lewin's (1946) work consisting of look, think, act and reflect. By making small adjustments in professional practice and carefully examining the impact of the change through systematic data analysis, teachers can continue to increase their efficacy, making action research a powerful methodology to improve instruction and learning.

What you need to know

This research focused on how to document decision-making in a complex action research study. Herr and Anderson describe action research as "designing the plane while flying it" (2005, p. 69). Unlike other research methodologies, action research remains emergent throughout the research period. Data is analyzed while the study is being conducted and findings are used to make adjustments for subsequent cycles. The challenge for action researchers is to document all the researcher's decisions throughout the research process. When an airplane crashes, investigators turn to the black box which captures critical information about the flight. The *Pre Flight*, *In Flight* and *Post Flight* strategies I developed in this research served as my black box. They guided me to systematically document, analyze, and reflect on what I was learning while flying the plane.

How the research was conducted

The researcher facilitated seven leadership development sessions with a cohort of teacher leaders. The same strategies were used for each session to systematically document, analyze, and act upon the findings. The *Pre Flight Planning* procedures included the preparation of the Researcher's Action Research Cycle, Session Agenda, Facilitation Guide and Researcher's Checklist. The *In Flight Observation* procedures included documentation and feedback through the Participants' Response to Activities, Participant Reflections and Researcher's Reflections. The *Post*

Flight Analysis procedures used to make sense of each session and document what was being learned included the Logic Model, Session Summaries, and Cumulative Themes. Once all ten steps were complete, the focus would shift towards planning for the next session.

What the researcher found

The *Pre Flight Planning* Strategies provided a vision and structure for participants, ensured I was prepared to facilitate, attended to logistics, and tracked my data processing techniques. The *In Flight Observation* strategies documented participants' voices and collected observations, feedback, and input from participants and the researcher. The *Post Flight Analysis* strategies allowed me to consolidate and summarize individual sessions and make comparisons between sessions through cumulative themes. Once the *Post Flight Analysis* was complete, the *Pre Flight Planning* process would begin for the next cycle, using the consolidated findings to determine the focus for the subsequent session.

How this research can be used

This systematic method of documenting decision-making in an action research study can be applied to other types of process-heavy research. Keeping track of large amounts of data and conducting ongoing analysis throughout a research study necessitates that the researcher is extremely organized and systematic in his/her work. The ten-step process I have described effectively documented a complex learning environment, facilitated sense-making from multiple forms of data over an extended period of time and proved effective throughout a complex action research study. Techniques such as these can be useful for novice researchers, those new to action research, and those seeking to refine or strengthen their documentation and analysis procedures. The systematic approach can be useful for any researcher needing to articulate their decision-making process or recreate their learning journey.

About the researcher

Dr. Cathryn Smith is an Assistant Professor in the Department of Leadership and Educational Administration in the Faculty of Education. She teaches courses on classroom management, teacher leadership, supervision and evaluation, administrative leadership and action research. Her research interests include facilitating dialogue and collaboration in online communities, teacher-led professional learning, capacity building in rural schools and teacher leadership.
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Publications based on this research

Smith, C. (2015, April). Becoming an efficacious action researcher: A traveler's guide. *The Canadian Journal for Teacher Research*: *Teachers Leading Transformations.*
http://www.teacherresearch.ca/blog/article/2015/04/06/254-becoming-an-efficacious-action-researcher-a-travelers-guide
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