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Action Research as Inquiry for Education Students

Samantha Godbey
University of Nevada, Las Vegas, samantha.godbey@unlv.edu

CHAPTER 16*

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As an education librarian and former teacher, when I consider the impact of the Framework for Information Literacy for Higher Education[1] (Framework) on my instruction, I consider its potential impact on my students in several different roles—as students, educators, and scholars. In fact, these roles overlap for my students during their degree programs, as most of them participate in field placements in K-12 schools while pursuing their degrees. Helping students gain the skills and confidence to approach research in their coursework and beyond is a key focus of my work, and the Research as Inquiry threshold concept stands out as significant and useful in approaching discussions about research with my students.

This threshold concept can be challenging to integrate into course assignments, as my undergraduate teacher education majors do few research-based assignments during their program. Resources are often provided to them, and the latter portion of their coursework emphasizes practical training via fieldwork and student teaching placements. I, however, firmly believe that we should ensure that all students are prepared to not only search but to do research, if not especially those professionals who will be teaching and working in other roles with our nation's children.

The University of Nevada, Las Vegas (UNLV), where I work, is situated in the center of the fifth largest school district in the nation and has one of the

most diverse student bodies in the nation. The diversity of the student body and the school district was one of my main motivations in coming to this university. My own graduate studies in education prepared me to serve as an English teacher in multicultural, urban schools, so my approach to librarianship is reflective, critical, and grounded in an awareness of the diversity of student experiences and the wide-reaching impact of the work my students do.

At UNLV Libraries, our librarians strive to be partners in education. For me, engaging with the Framework is an opportunity to approach my work critically by actively considering what the troublesome points in learning are likely to be for my students—from undergraduate through doctoral students—and adjusting instruction accordingly. For librarians, asking a question and answering that question is rarely seen as a point-to-point process and, therefore, Research as Inquiry is one of the easiest of the Framework's threshold concepts for librarians themselves to grasp. However, for my outcomes-oriented students, this concept is more difficult. As articulated in the Framework, this threshold concept posits that: "Research is iterative and depends upon asking increasingly complex or new questions whose answers in turn develop additional questions or lines of inquiry in any field."[2]

That said, this threshold concept does pose challenges for librarians as well. In my experience, many librarians conflate the Research as Inquiry and Search as Strategic Exploration threshold concepts. To me, the distinction between research, i.e., the act of engaging in inquiry via formal and informal methods, and search, the act of locating sources, is a necessary and important one. Separating "research" from "search" provides an opportunity to separate the process of locating information from the processes by which we create new knowledge and understanding.

In this chapter, I explore Research as Inquiry within the context of the field of education by aligning this threshold concept with action and practitioner research, which are practiced in the field of education, as well as library and information science. I argue that the Research as Inquiry threshold concept offers a way of thinking about research that aligns with the values of both our fields and provides motivation for discussion about research. Furthermore, thinking of Research as Inquiry as a threshold concept acknowledges the troublesome nature of research itself and of accepting one's potential as a researcher and scholar. I conclude the chapter with suggestions for how one might approach incorporating this concept into one's instruction and other interactions with students from the undergraduate to graduate level.

Overview of Research as Inquiry

As I have already noted, Research as Inquiry presents a challenge to my stu-

dents. Research has been defined as, "Study or investigation, in an organized and thorough manner, to establish concepts, principles, and facts."[3] This definition offers a traditional, linear vision of research that, while it accommodates the potential difficulty of the research process, establishes research as a direct process with a defined outcome. My students struggle with even this straightforward mode of research, particularly in how to be organized and thorough in their investigation of a topic. However, the threshold concept of Research as Inquiry problematizes this traditional notion of research by stating that research is iterative in nature. The frame refers to a "spectrum of inquiry" that ranges from simple to more sophisticated questions. Novice learners must "acquire strategic perspectives on inquiry and a greater repertoire of investigative methods" in order to successfully engage with this full spectrum of inquiry.[4] The strategies my students and professors frequently request for approaching even simple information searches can be applied across this spectrum of inquiry. Nonetheless, for many, accepting the idea of research as a more complex, inquiry-based practice remains difficult.

Key knowledge practices for this frame include formulating research questions, determining the scope of research, utilizing a variety of research methods to gather information, organizing that information, and drawing conclusions based on the synthesis, analysis, and interpretation of that information. Embedded within each of these knowledge practices is additional language that emphasizes the iterative, potentially complex process of meaningful research. For example, the knowledge practice regarding the formulation of questions states that this must be done "based on information gaps or on reexamination of existing, possibly conflicting, information." Questions must not be formed and left unexamined due to the information one discovers; they must, importantly, be reexamined and re-formed. The use of research methods should be "based on need, circumstance, and type of inquiry." The information gathered should be organized not only in logical but "meaningful" ways. Each of these knowledge practices leads a researcher to "consider research as open-ended exploration and engagement with information."[5]

As with students in many disciplines, the questions I am asked are often focused on the nuts and bolts of locating materials, usually articles, and are presented as "I need five articles on the topic of…" or "I need qualitative articles from the past five years on this topic for this age group." When my students are this assignment-focused, how can I prepare them to maintain intellectual curiosity in the face of the day-to-day challenges of teaching? Why should this matter to them? How can I motivate them to explore this troublesome concept?

Especially disruptive within this frame is the notion that there are "problems or questions in a discipline… that are open or unresolved," and that the

"process of inquiry extends beyond the academic world to the community at large." It is in this idea that I find the Research as Inquiry threshold concept to be especially important to these education students who are studying and entering a field with so many unresolved questions, from what teaching strategies will be effective to larger educational policy issues. It is through helping education students to develop dispositions such as "valu[ing] intellectual curiosity in developing questions and learning new investigative methods"[6] that we can best prepare them to successfully engage in inquiry as postsecondary students and, as important, prepare them to engage in inquiry out in the field.

Research among educators

The importance of research and inquiry are documented in the field, notably within the Code of Ethics of the American Educational Research Association (AERA).[7] This code "sets forth the ethical principles and standards that govern the professional work of education researchers."[8] It is "intended to provide guidance that informs and is helpful to education researchers in their research, teaching, service, and related professional work," acknowledging the intertwined nature of those aspects of an educator's work.[9] I focus here on the AERA code and not any of the applicable accreditation or professional standards because I work with students preparing to become not only teachers but also administrators, counselors, higher education faculty and staff, and others. The common thread for all these future professional positions is the opportunity for research, and in particular the possibility for action research, particularly among those who do not pursue a traditional research-based degree such as a PhD.

The AERA Code of Ethics identifies five guiding principles for educational research: professional competence; integrity; professional, scientific, and scholarly responsibility; respect for people's rights, dignity, and diversity; and social responsibility. Within the first principle regarding professional competence, educational researchers "recognize the need for ongoing education in order to remain professionally competent; and they utilize the appropriate scientific, scholarly, professional, technical, and administrative resources needed to ensure competence in their professional activities."[10] In other words, educational researchers should continually attempt to increase their professional competence via research and scholarly activities. The fifth principle regarding social responsibility reminds educators of "their professional and scientific responsibility to the communities and societies in which they live and work. They apply and make public their knowledge in order to contribute to the public good. When undertaking research, they strive to advance scientific and scholarly knowledge and to serve the public good."[11]

Educational researchers are encouraged to see research as an integral part of their service to the profession. I highlight the first and last guiding principles due to their alignment with practitioner and action research.

Practitioner and action research

The term practitioner research is often used interchangeably with action research and will mostly be treated as such in this chapter. However, in the literature practitioner research is generally more broadly defined. Peter Jarvis, author of the seminal book on practitioner research, for example, defines practitioner-researchers simply as "practitioners who do research."[12] He notes that practitioner research is a logical outcome in professions such as education and nursing, in which the knowledge one gains during training is insufficient, as one must participate in ongoing learning during the practice of that profession.[13] The definitions of practitioner and action research are intertwined. Kemmis notes, for example, that "Action research aims at changing three things: practitioners' *practices*, their *understandings* of their practices, and the *conditions* in which they practice."[14]

I note the term practitioner research especially because of its use in the field of library science. Watson-Boone, for example, provides an overview of practitioner research and an analysis of twenty-four librarian practitioner-researcher articles, noting that practitioner-research is as well-aligned with librarianship as with nursing or education.[15] She lists six methods for practitioner-research, including action research and case studies, offering a guide for librarians seeking to pursue this kind of research. This is important, she argues, because "Practitioner research by academic librarians demonstrates, and acknowledges, involvement in a learning society."[16] Others have also highlighted the need for increased practitioner involvement in research among library and information science professionals,[17] stating that "The presence of librarian practitioner-researchers is crucial if evidence based library and information practice is to move forward in a practical as well as theoretical way."[18]

The term "action research" is most often applied specifically to teachers involved in conducting practitioner research in order to improve their practice. A teacher might, for example, conduct research within his or her classroom on methods to improve student engagement. Johnson defines action research as "the process of studying a real school or classroom situation to understand and improve the quality of actions or instruction."[19] Regardless of the field in which it is conducted, action research is intimately linked with the idea and goal of "change" and improvement.[20] Jacobs and Cooper, for example, note that "action research involves teachers in making change happen"

with regard to their teaching and student learning.[21] Dickens and Watkins state that the essential goal of action research is "to improve and to involve."[22] Kemmis refers to action research as "a practice-changing practice."[23]

Several authors note the importance of action research in addressing the problem of the gap between theory and practice in education due to the fact that traditional research is limited to academics in research institutions.[24] Kemmis argues that action research is less about closing this gap and more accurately about "closing the gap between the *roles* of theorist and practitioner" in order to "give practitioners intellectual and moral control over their practice."[25] This type of research is less concerned than traditional research with generalizability and has been criticized as being less rigorous; however, action research can also be seen as more authentic and more directly representative of what is actually happening in the classroom.[26] Others have pointed out that action research also serves the very important purpose of empowering teachers[27] and that involving teachers in research increases ownership of classroom problems and increases the likelihood of their implementing research findings.[28]

Action research and Research as Inquiry

The Research as Inquiry frame states that research is iterative. Action research, as defined by Kurt Lewin, founder of action research, is also a recursive process. When writing about action research, authors refer to its cyclical nature with words such as cycles, spirals, and flows, noting that during the action research process, steps often need to be repeated.[29] Lewin described action research as consisting of a spiral of steps: "planning a change, putting the plan into action, observing what happened, and re-formulating the plan in the light of what had happened."[30] The cycle must be repeated as needed to arrive at the goal of action research, i.e., to improve one's practice. The spirals and cycles one finds in the literature on action research should not be seen as prescriptive, however. Kemmis, McTaggart, and Nixon, for example, note that action research does not usually fit into a tidy process, and in reality "is likely to be more fluid, open and responsive."[31] According to McTaggart, "The cyclic nature of the Lewinian approach recognizes the need for action plans to be flexible and responsive. Lewin recognized that, given the complexity of real social situations, in practice it is never possible to anticipate everything that needs to be done."[32] This cyclic idea aligns well with the Research as Inquiry idea that "research is iterative and depends upon asking increasingly complex or new questions whose answers in turn develop additional questions or lines of inquiry" and aligns with dispositions such as "consider[ing] research as open-ended exploration and engagement with information" and "valu[ing] persistence, adaptability,

and flexibility" in the research process.[33] Emphasizing the iterative nature of research in general, and action research in particular, is especially notable given findings that recent graduates tend to complete tasks as quickly as possible, despite employers' need for them "to apply patience and persistence when solving information problems in the workplace."[34]

Additionally, this threshold concept refers to the extension of research to "the community at large" and notes that "the process of inquiry may focus upon personal, professional, or societal needs."[35] Parallels between this notion and the call to action inherent in action research are clear. Through action research, educators can actively grapple with the questions and problems of their profession and society. Also, while action research can be solitary and reflective, many authors encourage collaboration among practitioner- and action-researchers. The often collaborative nature of action research aligns with the statement within the Research as Inquiry frame that "Experts recognize the collaborative effort within a discipline to extend the knowledge in that field."[36]

Importance of action research to education students

Merging research and practice through action research is especially important given my students' values. Many come to the College of Education because of their commitment to social justice, and they are passionate about their profession. They care deeply about their future students and perceived disparities in the world, and many have overcome challenges in their own lives via education. Their emotional investment in the outcomes of their work as educators places an additional burden on them to succeed as students; however, for those students not enrolled in a doctoral program, research is often seen as separate from the practical side of career preparation. This is especially true for master's students, who often come to me overwhelmed by their capstone projects. Using action research as a model enables students to reconcile their identities as students with their future career as educators and education researchers. By embracing the idea of research as an iterative process that is a logical component of engaging in ongoing improvement, students can begin to think of themselves as researchers during their academic studies.

At my institution, students do some structured academic assignments with research components, i.e., locating and/or analyzing scholarly sources, in their first- and second-year courses, but they do little active work of locating sources in their upper-level coursework. Students are focused on fieldwork and practicum experiences that take them into local schools, and "scholar-

ly" research is deemphasized. In focus groups I conducted with upper-level students, education students reported that in these courses they rarely need to find anything. If they need to use outside sources, they are provided by instructors. This lack of research-based assignments establishes a division between academic scholarship and the students' fieldwork experiences. Teaching students about research methods such as action research may help students understand the potential for integrating research and practice earlier on. Further, the discussion of action research as related to Research as Inquiry can help students to merge their identities as students and as teachers, i.e., to cultivate their identities as lifelong learners participating in ongoing inquiry.

It is imperative for colleges and schools of education to prepare students for research in order to cultivate what Davis refers to as "scholarly practitioners."[37] Davis also calls for a "paradigm shift from the notion of teachers as purveyors of knowledge to teachers as cocreators of knowledge." Discussing the Research as Inquiry threshold concept with education faculty and instructors provides a logical and useful approach to integrating library instruction into upper-level undergraduate courses and graduate courses. Drawing on the language of action research and using the need to prepare students as action researchers to justify an emphasis on this threshold concept allow librarians to demonstrate its relevance to faculty and students of education. Incorporating Research as Inquiry into interactions with students is possible, and even necessary, at each level.

Integrating Research as Inquiry

Undergraduate instruction. In undergraduate instruction, introducing the troublesome and cyclical nature of research is appropriate within lower-level courses such as first- and second-year seminars. In my own instruction, we have chosen to emphasize the threshold concepts of Scholarship as Conversation and Information Creation as a Process in disciplinary first- and second-year seminars in order to introduce students to specific concepts at strategic points in the curriculum. However, Research as Inquiry also has a place in instruction and conversations with these students.

First steps for introducing Research as Inquiry at this stage include introducing students to "ethical and legal guidelines in gathering and using information," and helping them to build a rapport with librarians to encourage them to "seek appropriate help when needed." Assignments at this level also often encourage students to "seek multiple perspectives during information gathering and assessment."[38] For example, in the first- and second-year seminar courses in our College of Education, students do a structured debate assignment and must use both outside sources and course readings. Students

also explore a social issue related to a service learning experience. Students gather only three scholarly articles related to their topic, so the extent to which students can seek multiple perspectives or to which students must organize information in meaningful ways, both knowledge practices for this frame in the Framework, is limited. They can, however, work to break complex questions down in order to limit the scope of research to an appropriate level for this particular investigation. Providing action research as an example of the kind of research which students can conduct can help to give an example of how this knowledge can be applicable in the field.

In upper-level undergraduate courses, librarians might consider utilizing the connection between action research and Research as Inquiry in conversations with instructors working with courses concurrent with practicum and fieldwork assignments. We should pursue deliberate conversations with education instructors regarding the possibility of including assignments related to action research in these courses. Students need not actually implement action research projects at the undergraduate level. A first step in preparing them to conduct this kind of research later in the field is to help students become familiar with action research methods and projects by reading action research articles. In one course or assignment, students could be provided with action research articles. In a later course or assignment, students can learn strategies for locating these action research articles, thereby "acquir[ing] strategic perspectives on inquiry and a greater repertoire of investigative methods."[39] Even without conducting a study, students could develop a written research project proposal. In this proposal, students could articulate how they would strategically approach the project, including search strategies and a discussion of points in the process when their investigative methods and the research questions themselves might need to be reassessed. Search strategies should especially include databases such as ERIC, which will be available to students after graduation.

Graduate instruction. The approach to integrating Research as Inquiry will vary depending on the type of graduate degree a particular student is pursuing. Many doctoral programs have a traditional research focus, so a justification for studying research methods is less likely to be needed. These students are already aware that they need to participate in research, but at the same time, many are not sure how to begin. Helping these students to understand the iterative nature of research and how that is tied to yet distinct from search (and Searching as Strategic Exploration) is essential to doctoral student success. Addressing Research as Inquiry especially will help these students to progress from novice learners as they "acquire strategic perspectives on inquiry and a greater repertoire of investigative methods" to more experienced researchers who "value persistence, adaptability, and flexibility and recognize that ambiguity can benefit the research process."[40]

Grounding Research as Inquiry in action research is likely to be more applicable for master's students working on capstone papers and less extensive research projects than doctoral students. Librarians could utilize a similar approach to master's level instruction as with undergraduate instruction. Instruction with courses earlier in the program would emphasize an understanding of the iterative nature of research, the availability of help, and building the students' repertoire of investigative methods. Later in the program, assignments in which students locate and read action research articles, develop research plans, and potentially implement those research plans would best be aligned with this threshold concept.

Workshops. Workshops also offer opportunities for in-depth exploration of the Research as Inquiry threshold concept. I currently teach two graduate-level workshops that are well-aligned with Research as Inquiry. Neither is explicitly tied to action research, but they are worth noting here as examples of how to address this threshold concept with graduate students.

The first is a workshop on Conducting a Literature Review, in which we address both research (Research as Inquiry) and search (Searching as Strategic Exploration). I demonstrate and we practice specific search strategies, but we also discuss the term "research" and the iterative nature of research. Activities include students drawing a map of the research process, reflecting on challenging points in the research process and identifying strategies for adapting to those challenges, and discussing questions such as *What is the difference between research and search?*

I also lead a workshop on Critical Reading, in which I take students through a structured, iterative reading process through which students read and re-read a research article from their discipline. Students practice identifying a question and/or goal for approaching that text; they then skim the article and re-read the article strategically. We practice annotating and discuss ways of organizing the information acquired from the article. Students are interested in practical tips on annotation and file storage, but these are grounded in a broader discussion of research. In this workshop, we use the practice of reading a single article as the starting point for thinking about the research process as a whole. We focus on knowledge practices, such as articulating a research question, breaking complex questions down into more manageable components, and assessing gathered information, as applied to a single information source. We also discuss strategies for organizing the information they have found in meaningful ways, placing emphasis on the fact that there is no single correct way to organize information. Each person approaches a source differently, and since the research process involves revisiting the information and rethinking the research question itself, reorganizing the information found is often a natural step in the research process.

Research consultations. Finally, I use the research consultation space to explore this threshold concept, especially with graduate students. In my one-on-one consultations with students, I have deeper conversations with students about research and student/teacher identity while we do activities such as examine and rework research questions or discuss strategies for conducting a literature review. Graduate students, in my experience, are often ready to have these conversations and are not simply task- or assignment-driven in our session. Consultations are an especially effective venue for discussion of a threshold concept because the format allows me to communicate with each student as an individual with individual experiences. The research consultation is a valuable forum for acknowledging how "ambiguity can benefit the research process,"[41] even if it is frustrating. While this is not scalable for all my students, it is highly effective for those with whom I do interact, many of whom are struggling with finding their scholarly identity, and what I learn from individual students has influenced my instruction as well. These one-on-one conversations help me anticipate trouble areas in whole-class instruction, thereby increasing the relevance and quality of my instruction sessions.

Conclusion

In my work with education students, I am helping them to become comfortable with research, as messy as it is. I find the concept of Research as Inquiry useful in helping me to break down the complex concept of research into components that I can manageably include in instruction and broach in conversation with students at all levels. Maintaining an awareness of the kinds of research that are practiced in the field of education, and using action research as an example that aligns well with the notion of research as an iterative process, allows me to situate the potentially lofty, impractical notion of an information literacy threshold concept within a context relevant to my students' future work as educators.

And why does it matter that this is a threshold concept rather than a standard or proficiency? Assuming the mantle of a researcher is troublesome for students. Gaining the confidence, and acquiring and sustaining the motivation to conduct research at an appropriate level is not simply a proficiency in my mind. Thinking of this idea and approaching it as a threshold concept acknowledges the existence of a liminal space that students approach from different directions and move through at different paces. When students grasp this threshold concept, their professional identity will expand to include the role of information and research co-creator. Having already moved through this liminal space myself, I find the idea of research as an iterative inquiry process to be both obvious and exciting. I hope for my students to get there,

too, to see themselves as capable of and excited about taking action through research—by engaging in the ongoing inquiry that will enable them to understand and improve the educational settings in which they will be working.

Notes

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20. For a historical exploration of action research definitions, see: Linda Dickens and Karen Watkins, "Action Research: Rethinking Lewin," *Management Learning* 30, no. 2 (1999): 127–140.
21 Sister Mary Ann Jacobs and Bruce S. Cooper, *Action Research in the Classroom: Helping Teachers Assess and Improve their Work* (Lanham, MD: Rowman & Littlefield, 2016), 13.
22. Dickens and Watkins, "Action Research," 131.
23. Kemmis, "Action Research as a Practice-Based Practice," 463.
24. Stephen H. Davis, *Research and Practice in Education: The Search for Common Ground* (Lanham, MD: Rowman & Littlefield Education, 2008); Johnson, *A Short Guide to Action Research*; Jacobs and Cooper, *Action Research in the Classroom*; among others.
25. Kemmis, "Action Research as a Practice-Based Practice," 468.
26. These ideas are widely discussed in the literature on action research. For one example, see Jarvis, *The Practitioner-Researcher, 99.*
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