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Abstract

Action research focuses on creating meaningful and authentic change for those involved, whether in a classroom or community. This action research study examined the perceptions and potential benefits of action research coursework within a doctoral program. Participants were a cohort of doctoral students (n=7) that participated in a graduate level action research course. Students in this study experienced shifts in their identities as researchers, knowledge of the methodology, and their perception of the function and value of action research. The authors argue that action research is a viable course option in doctoral programs and the research skills supported through the course and the completion of an independent research project expand research knowledge and prepare doctoral students for dissertation research across a variety of methodologies.

Keywords

action research, doctoral programs, higher education coursework, research courses, graduate teacher education

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Action Research in Doctoral Coursework: Perceptions of Independent Research Experiences

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Action research focuses on creating meaningful and authentic change for those involved, whether in a classroom or community. This action research study examined the perceptions and potential benefits of action research coursework within a doctoral program. Participants were a cohort of doctoral students (n=7) that participated in a graduate level action research course. Students in this study experienced shifts in their identities as researchers, knowledge of the methodology, and their perception of the function and value of action research. The authors argue that action research is a viable course option in doctoral programs and the research skills supported through the course and the completion of an independent research project expand research knowledge and prepare doctoral students for dissertation research across a variety of methodologies.

INTRODUCTION

Doctoral programs aim to prepare their students to become independent scholars within their respective fields. In the field of education, it is vital to examine how current doctoral programs within Colleges of Educations prepare researchers to work with and within classrooms and communities. Since 2000, there has been a reported increase in the use of action research (AR) as the methodology used in dissertations in both EdD and PhD programs (Vaughan & Burnaford, 2015). This increase alone is enough to continue conversations about the role AR courses should play in core doctoral courses, yet still "few academic faculty are trained in action research" (Herr & Anderson, 2005, p. 7) and may be unable to support doctoral students pursuing this methodology or support a core research course focusing on AR. Doctoral programs in teacher education traditionally include limited research courses that focus on quantitative and qualitative methods, providing little opportunity for students to take courses in action research as part of their core program (Leech & Goodwin, 2008). By looking at the experiences of future educational researchers (doctoral students), this article focuses on the impact an action research course has on their perceptions of research and the roles researchers play in today's schools and communities. By looking at their perceptions throughout an AR course as well as discussing the challenges they experience and the research skills they developed, we hope to show the unique value AR coursework can bring to all doctoral students in their journey of becoming educational researchers.

CONCEPTUAL FRAMEWORK

In order to situate the study, it is necessary to consider key ideas from within the methodology of action research that create the conceptual framework we draw from. Our view of AR is grounded in the work of Cochran-Smith and Lytle (2009), which positions AR as a vehicle of change and a tool for advocacy through the development of 'inquiry as stance.' They describe "inquiry as stance' as a grounded theory of action that positions the role of practitioners and practitioner knowledge as central to the goal of transforming teaching, learning, leading, and schooling (p. 119)." While this explanation may be easily accessed by those teaching in classrooms, it is important to expand the reach of AR to those working within communities as well. Stringer (2007) formally conceptualizes AR as a process that

provides the means by which stakeholders – those centrally affected by the issue investigated – explore their experience, gain greater clarity and understanding of events and activities, and use those extended understandings to construct effective solutions to the problem(s) on which the study was focused (p.20).

Stringer's definition retains Cochran Smith and Lytle's perspective of AR as a vehicle for meaningful change for those involved in the project. Lastly, we must look at what is means to be involved in an AR project and the power dynamics that may exist within a research project. Working from Herr and Anderson's (2005) definition, we define AR as "inquiry that is done by or with insiders to an organization or community, but never to or on them (p. 3)." This shift in thinking about the positionality and inherent power of the researcher is an important concept for doctoral students to acknowledge and recognize within their own work. The historical divide that exists between traditionally generalized research produced by university researchers and the inquiries completed by teachers that focus on the specific needs of one's classroom have privileged basic research and marginalized applied research. Action research differs from traditional social science by focusing on intervention within the research setting, often in multiple cycles. Action researchers are often concerned with both the improvement of practice as well as creating a valid and systematic study (Cochran-Smith and Lytle, 2009; Herr & Anderson, 2015).

REVIEW OF THE LITERATURE

This brief review of the literature examines the role research courses play within doctoral programs on a macro level and then looks more closely at action research within those programs. We found it helpful to understand the larger context of research courses currently used within doctoral programs as we examined where and how action research coursework best fit. We also provide background knowledge on the benefits and challenges of action research as coursework and as a dissertation methodology.

Research Education Courses

The importance of research courses within a doctoral program cannot be underestimated. Innes' (1993) foundational report on research education classified independent research as the most challenging yet most important part of a doctoral degree. Goldstein reexamined Innes's initial report in 2012 to find that qualitative research courses are not universally required as part of the research methodology coursework in the doctoral programs examined. Although AR embraces the use of qualitative and quantitative methods, it is more likely found in texts used in qualitative methodology coursework. Across the field, there is wide variation in the amount and type of research education courses within doctoral programs. According to Card, Chambers, and Freeman (2016), an average of three credits are required for both basic and advanced qualitative courses in doctoral programs within Colleges of Education, with an additional three credits required for quantitative courses (Leech & Goodwin, 2008). PhD programs and EdD programs require nearly equal credit hours in specialty or other research methods courses, although AR was not directly mentioned as one of the options. The literature yields conflicting responses on the approach programs should take to balance the myriad of research methods used by scholars. According to Brannen (2005) qualitative research is often seen as a way for the researcher to have greater reflexivity, allowing researchers to understand the populations they work with on a deeper level. Henson, Dull, and Williams (2010) advocate for more quantitative work in doctoral programs, specifically a greater collective quantitative proficiency. They argue that modern quantitative methods are not adequately taught in doctoral programs, potentially putting students at a disadvantage when it comes to having mastery of research methodology. Ferguson, Hovey, and Henson (2017) echoed this sentiment in their study, noting teaching quality in quantitative classes was a concern among doctoral students in education programs. Brennan (2005) explains this divergent approach to teaching research should be evolving to represent a convergent approach, successfully incorporating both methods. Creswell and Garret (2008) also support the use of a mixed methods research approach in a doctoral program. Utilizing the strengths of both qualitative and quantitative research methodologies, they believe students will gain a better understanding of research problems as opposed to using only a qualitative or quantitative method (Creswell & Garret, 2008). With the current debate over an emphasis on quantitative, qualitative, or a mixed method in doctoral programs, this article argues that AR can support the development of foundational research skills that can be applied across all approaches and serve as a methodology border-crosser.

Action Research in Doctoral Programs

The role of action research in doctoral program coursework provides students with real-world opportunities to conduct academic research on issues plaguing their specific field, increasing "students' confidence in becoming researchers in their own right" (Hendricks, 2009, p. 12). Despite the literature citing positive benefits of participation, Osterman, Furman, and Sernak (2014) determined that AR is not currently a common practice used to satisfy dissertation program requirements. Brown, Dressler, Eaton, and Jacobsen (2015) concluded that "just as action research enhances graduate students' teaching and research, action research can be an approach that enhances instructors' pedagogy and scholarship" (p. 74). The literature supports a movement for institutions of higher education to include AR in their graduate programs. AR is used as the major assignment in several graduate teacher education courses, asking teachers to practice the methodology within their classrooms in hopes of maintaining AR as part of their personalized instructional practice (Sela & Harel, 2012). The field of education deserves the experiences of robust AR studies intended to move professional practice forward and positively impact student achievement. A doctoral program is a time to deepen experiences in AR following earlier opportunities in a bachelor's or master's degree program. This higher level of participation may shift a doctoral students' perception of the function and value of action research.

The role of AR within partnership schools also creates an opportunity for multiple stakeholders to converge to conduct a study that partners higher education, the K-12 educator, and doctoral students. Arhar et al. (2013) note that "the limitation to this approach is that schools and universities cannot fully change their cultures nor can university faculty become full members of school faculties, and vice versa ... " (p. 219). However, efforts to overcome these challenges may be possible through this triad of collaboration and mirror the real-world experiences of working with schools as an educational researcher. Doctoral students, teacher action researchers, and faculty advisors struggle not only with their primary role but with the "insider versus outsider knowledge; power and status relations; and work-place conditions" (Arhar et al., 2009, p. 233). Reverting to a familiar position is more comfortable than challenging oneself to assume a role necessary for success with the project. Action research involves others. It is an expectation and opportunity to create change for lifelong learners. Unique action research experiences such as these offer doctoral students opportunities to work within a variety of educational contexts as well as build the research knowledge they need to prepare for their dissertation.

Benefits and Challenges of Action Research in Doctoral Programs

Within teacher education programs there is a reported increase in the number of AR dissertations produced from both EdD and PhD teacher education programs since 2000 (Vaughan & Burnaford, 2015). With an increase in the amount of AR dissertations being conducted by doctoral students, it is essential that faculty have the experience and depth of knowledge in the methodology to guide students. Klocker (2012) discussed the process of completing a participatory AR dissertation and noted that "finding an appropriate supervisor is a major issue for all graduate students" (p. 156). This aligns with survey research conducted by Osterman, Furman, and Sernak (2014) who found that only 52% of doctoral chairs at institutions offering EdD programs in Educational Leadership or Administration had ever chaired an AR dissertation although a significantly larger percentage felt that AR supported participation, collaboration and social justice goals for school leaders. With limited resources and training opportunities for doctoral students in AR methods, it becomes necessary to align programs with trends seen in current dissertation work. Giving students experience in AR as part of their programmatic coursework not only exposes students to the benefits and possibilities associated with the methodology but also pushes

faculty members to become familiar with methodologies they may not use regularly or did not encounter in their own doctoral programs.

Arguments for and against the use of AR as a dissertation or within a doctoral program can also be conflicting. A typical argument against the use of AR is that the methodology is inferior to traditional quantitative dissertations; other arguments state that the methodology can be difficult for doctoral students "either because of the politics of their position or because of the demands of the methodology" (Osterman, Furman, & Sernak, 2014, p. 97). Osterman, Furman, & Sernak (2014) go on to explain that students conducting research within their own context might battle additional resistance from administration or supervisors who are unwilling to have their context examined. The politics of conducting an action research dissertation within a students' work environment can add additional challenges to the dissertation process. Considering the controversy that may exist around its role in a doctoral program, it is helpful to explore the reported benefits of exposure to and use of action research.Amrein-Beardsley et al. (2012) chronicle the experiences of the first cohort of EdD students in a newly designed doctoral program with embedded AR experiences that culminate in an AR dissertation. Multiple cycles of completed AR projects "provided them valuable opportunities to reflect on their practice and improve their research skills" (p. 107) before they reached the dissertation phase of their program. AR is often a collaborative process, and specific approaches such as participatory action research (PAR) depend on the researcher forming relationships and gaining entry to the community of focus. Klocker (2012) discusses the advantages of doctoral students conducting their research as part of a collaborative PAR team, in that "the time-saving potential of PAR has scarcely been acknowledged in the literature but was most apparent to me during the data collection phase of the project" (p. 154). While AR dissertations may take longer if multiple cycles are completed, Klocker goes on to discuss how being part of a team allowed for more data to be collected in a shorter timeframe, thus meeting project goals and supporting the growth of collaborative research.

One of the most significant reported benefits of the use of AR within doctoral programs is exposure to some of the core beliefs of AR as it relates to social justice issues. The purpose of AR is fundamentally linked to addressing problems of practice, whether in the classroom, local community, or global context. Action research "relies on research processes that tend to be collaborative and inclusive, strategies that have the potential to shift power relationships and facilitate joint efforts that cross lines of organizational hierarchy" (Osterman, Furman, & Sernak, 2014, p. 101). There is still work to be done supporting doctoral students who wish to use action research as a methodology, and with support from the literature highlighting an increase in the use of the methodology, programs should continue their discussion of the role of action research within their doctoral programs.

METHODOLOGY Course Description

This action research study occurred within a semester-long (15 weeks) graduate-level action research course. The course itself serves as a capstone experience for a MEd program in Curricu-

lum and Instruction and is a core research requirement for the EdS in Curriculum and Instruction. Currently, it is not required to take an AR course as part of the PhD in Curriculum and Instruction program, yet many students enroll as a research elective. The course is designed to be taught online, with each student designing and conducting their own AR project in a school or the community. Students are given the freedom to formulate their own research questions and submit a design plan for approval to their instructor, but must complete a full research project and paper by the conclusion of the course. As part of this study, the doctoral students who were enrolled in the Spring 2017 section of the course were invited to be part of a "doctoral strand" which included four face-to-face meetings in addition to their regular online coursework. All doctoral students enrolled in the course agreed to participate in the meetings as well as the study. The goal of these meetings was to deepen knowledge about AR as a methodology and possible dissertation choice, discuss additional readings, and share progress on the various aspects of their individual projects (i.e. question development, design, data collection and analysis). The final product for all students, including doctoral students, is a comprehensive research report including an introduction to the problem, literature review, methodology, findings, and reflection section. Data collected for this study were part of this regular coursework completed by doctoral candidates within the action research course.

Participants

Seven doctoral students were enrolled in this course and invited to participate in the doctoral strand meetings and additional readings. All seven agreed to participate. Six of the doctoral students were enrolled in the PhD in Curriculum and Instruction program, and one student was enrolled in the EdD in Special Education program, all students were at various places within their programs of study. Their doctoral programs do not ask students to identify a track or particular area of study, but rather to develop unique areas of specialization by taking courses throughout the university, with advisor approval, to build a knowledge base that will support them in their dissertation research. Students within this course identified themselves as being interested in multicultural education, TESOL, special education, online learning, and higher education instructional practices. All the doctoral candidates who were enrolled in the course also served as practitioners or were involved in non-traditional educational settings where they conducted their action research course projects.

Method and Data Sources

The goal of this action research study was to assess the impact of the coursework in an action research course (EDF 6918: Action Research in Schools and Communities) on doctoral students' perceptions of the usefulness of the methodology to their development as researchers. The following research questions guided this study:

- 1. How do doctoral students' perceptions of the function and value of action research shift through a graduate action research course?
- 2. What research challenges arise for doctoral students in the process of a graduate action research course?
- 3. What research skills are developed or supported through a graduate action research course?

This study focused on collecting various course assignments and student reflections to address the research questions. Table I provides additional information on the course assignments collected to answer the identified research questions. Additionally, student and instructor reflections were collected following each (4) doctoral strand meetings.

The research team consisted of the course instructor and two doctoral students who were also students within the course. The addition of doctoral students to the research team provided an insider perspective throughout data analysis and served as a validation check for the instructor. Researcher bias is a "very common threat to legitimation in constructivist research because the researcher usually serves as the person (i.e., instrument) collecting the data" (Onwuegbuzie & Leech, 2008, p. 236). While bias is an accepted variable in all AR projects, attempts were made to increase validity by including participants as part of the research team to minimize any a priori assumptions the instructor may have had about the course or the students. All analysis occurred after the course was completed as the research team were participants in the course – either as

Table 1. Alignment of research questions and data collection.				
	RQ I (Perceptions of function and value)	RQ 2 (Challenges)	RQ 3 (Research skills)	
Research design plans submitted to instructor for approval			Х	
Discussion board post - Post a draft of your research question along with some context about what data you will collect, how, and why			х	
Discussion board post – Consider how action research began and its original purpose. How has that purpose changed, if at all? Who should conduct action research? What are the implications?	х			
Discussion board post - After completing your own observation using the protocol from the module, provide a brief summary of the observa- tion. You can also include your perceptions or assumption re- sulting from your observation.		x	x	
Discussion board post – In order to learn from others, please share one key finding from your study along with the qualitative and quantitative data you are planning to use to support it when you write it up.		×	×	
Students reflections com- pleted after each doctoral strand meetings (4)	Х	Х	Х	
Reflection section of action research final report	Х	Х	Х	
Instructor reflections com- pleted after each doctoral strand meeting (4)	Х	Х	Х	

the instructor or students. At the conclusion of the semester, assignments from doctoral students were downloaded through the Learning Management System (LMS) and assignments hand-coded in response to the research questions. Individual course assignments and reflections were the unit of analysis in this study and were coded simultaneously by all three researchers. Results were compared throughout the coding process to determine an initial code list for each research question. Group coding and dialogue were particularly important to this study as the research team consisted of the course instructor and two students. Some assignments were previously identified to address one or more of the research questions for this course (see Table 1), so they were analyzed multiple times with the knowledge that we were looking for critical ideas pertaining to individual research questions. However, as a research team, we discussed not only what we found related to that research question, but what was found above and beyond those ideas to be open in our analysis.

As discussed in Schilling (2006), our team developed and validated our coding scheme in the early stages of coding. Using early code comparisons in the first round of data analysis, our team checked coding consistency to create a high level of intercoder agreement. When coding consistency was low, the team negotiated codes until we reached consensus before we continued coding the rest of the data. After a full round of coding each data source, individual codes were reexamined as a team to look for themes that addressed the research questions. Themes were found by looking at ways in which the codes were connected to each other and to the research question guiding each level of analysis (perceptions, challenges, and research skills). Table 2 lists initial codes developed for each research question as well as the themes discovered in response to the research questions. Themes will be further discussed in the findings section.

Table 2 . Initial codes and themes developed in response to research questions.			
Research Question	Initial Codes	Themes	
#1 Perceptions of function and value	UAR - Understanding Action Research PER - Perceptions ARAC - Action Research as Change LK - Lack of Knowledge GR - Growth	 Shift in identity as a researcher Shift in knowledge about action research Shift in perception of action research and value 	
#2 Challenges	CHA - Challenges in Analysis CHPART- Challenges with Participants CHDC-Challenges with Data Collection CHEXP-Challenges with Researcher Experience	 Challenges associated with independent, self-se- lected projects Challenges with time 	
#3 Research Skills	RSD - Design RSR - Rationale RSFB - Feedback (Critique) RSRef - Reflection	- Design Skills - Implementation Skills - Reflection Skills	

FINDINGS Research Question One

Research question one sought to examine the perception shifts of the function and value of AR through a graduate course. Students in this study experienced shifts in three distinct ways; a shift in their identities as researchers as they learned about connections to AR within their field of study and experienced the challenges that occur in an AR project; a shift in their knowledge about AR and its applications, both currently and historically, through various course readings and discussions, and a shift in their perceptions of the methodology and its value as a form of research. At the start of the course, doctoral students demonstrated either a lack of knowledge about AR as a methodology or a limited scope based on their prior experiences. There was initial confusion about the term action research and what it meant. Students stated, "Before taking this course, I defined action research as a form of methodology often conducted by teachers working within the K-12 schooling system" or "I used to think action research was an opportunity for professional development." The course allowed the doctoral students' understanding of AR to grow through their use of the methodology. One of the students acknowledged his lack of exposure to AR in this reflection:

Prior to this course, I have only been exposed to quantitative research...I now view action research as an extremely flexible tool that can be used in a variety of settings. It was in one of our first discussion boards that I started to see the wide range of applications or questions that action research can help answer.

Another student commented that they "did not quite understand the value of AR or how it is different from qualitative research." As the course progressed and students became immersed in their individual AR projects, they began to make connections to the content and how it may help prepare them for their own dissertation process. In a reflection following one of the doctoral strand meetings, one student wrote, "action research absolutely has a place in a doctoral program. I am more confident in identifying an area of my own practice to study and focus on improvements." Another student commented on the experience of "doing research" instead of reading about it, "action research has helped me to think about my own dissertation on a smaller scale and break down the multiple aspects that are put into a dissertation topic."

A shift in thinking about the potential applications of AR occurred through the various applications of the methodology just within the course participants. One of the students who focuses his work on multicultural education commented that AR "offers the opportunity for reflective and critical practice amongst multicultural educators who have chosen to critique their own practice." While another student involved in higher education recognized the power that can come with being a part of the research process at her own university when she wrote, "likewise, action research has the potential to challenge the dominant power structure providing a voice to those who are impacted by topdown policies." Through her own research project, she gained a "voice" by capturing data that supported innovative instructional models within the higher education classroom.

Furthermore, course assignments and readings supported AR as an opportunity to create change and transform individuals as well as communities by working with others. This idea was evident within the doctoral students' reflections at the end of the course. Students captured these thoughts by commenting on "the transformative potential of action research, equipping teachers with the power to challenge policy and solve those problems" and explaining that they now "value the idea of recognizing the other individuals involved within the project." Dynamic shifts in thinking occurred alongside the development of an understanding of the research process and the role of the researcher.

Research Question Two

Research question two focused on the challenges that occurred for doctoral students in an AR course, specifically on their work as independent researchers. For this group of doctoral students, key challenges arose in two areas. The first challenge was the independent execution of the self-selected action research project and the second challenge was time management as a researcher.

Independent execution of a self-selected project

The doctoral students in the course had varying degrees of research coursework before taking this course. This course asked the students to be independent researchers, and after getting their research design approved by the instructor, they completed the research independently. Challenges were unique to the individual projects chosen by the students but were all common issues faced by being an independent researcher and ones they may encounter in dissertation research. For example, some of the students had trouble with participation in their study, one student explained, "My biggest challenges are getting more people to participate, especially those who do not know me." Problems with participant attendance were commonplace, "only 2 of the 3 people actually attended the conversation class." To complete the project, students needed to adjust their research design or expectations of participant numbers.

Even when the number of participants met the original student expectations, the data received from those participants was troublesome. For example, one student noted,

I randomly selected 25 students to be in my study group. Unfortunately, this number was too small...If the student pool were larger, there would have been more of an even sample of student work, as not all the postings were uniform in quality and length.

The same student further expressed frustration with the design of his instrument.

When the Likert-scaled questions were implemented, I selected one through five, when I should have used I-10...all the responses were too similar. I believe I would have been able to see more findings in the data if the questions had a larger response range.

The independent nature of their projects highlighted the challenges that students faced being "in charge" of the research design and implementation. In their reflections, they commented, "as I conducted my own research, I found myself unsure as to when to stop collecting data," and "as a first-time 'action researcher' the new experience can be a challenge. I'm learning as I'm doing." While design and execution were notable challenges, students consistently commented on their struggle with data analysis. Coding issues became a constant undertone in students' reflections. They expressed, "Some of the biggest challenges I had with data analysis were thinking of the codes and categorizing them or organizing the codes in the best possible way so I could get effective findings." Some students rose to the challenge and turned a weakness into an opportunity, stating "The biggest challenge is not a challenge but an opportunity. I am learning to code my data to answer my research question."

Time

Another challenge the doctoral students faced in the course was time management. The students encountered challenges with setting up their studies to coincide with the timing of the semester, when to start/stop data collection, and how many interventions to use to get the most significant impact without running out of time. One student reflected on the importance of this lesson by saying,"the most important lesson I learned during this study was in the timeline." As students became immersed in their own projects, the constraints of completing an AR project in one semester became a significant challenge. This was illustrated when a participant in one project desired more intervention time with the researcher,

> Due to my own personal time restraints, me and my mentee have agreed to keep each meeting

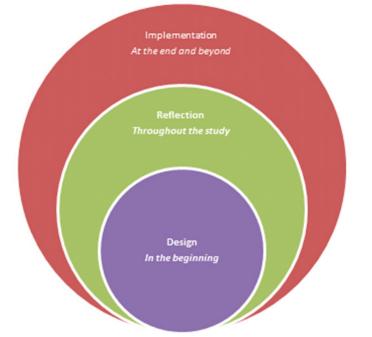
around the 1-hour time frame with a goal of meeting once/week. However, we have increased the number of times we meet from once a week to twice a week. I told her we can meet as often as she would like so she controls frequency (which in my opinion helps me understand her needs if she requests more meetings).

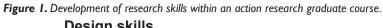
The time concern was echoed with similar statements,"the most challenging aspect seems to be time" and "my study has created the need for additional time." The challenges faced by doctoral students in this AR course mirrored the types of challenges many students may encounter in their own dissertation studies, giving these doctoral students valuable independent research experiences before their dissertation.

Research Question Three

Research question three asked what research skills could be developed or supported through a graduate AR course. Through coursework, readings, and work on their projects, students had opportunities to practice their own research skills and discuss their reflections with their peers throughout the semester. Figure I organizes the three prominent research skills developed by the doctoral students throughout this graduate AR course.

After developing the actual design, doctoral students defended the design with a rationale of its purpose and responded to critique from others through discussion board posts. They demonstrated reflection throughout the course and their project in order to maintain fidelity of the study's design. The skill of implementation can be seen at the culmination of the study when students determine results and identify the actions that contributed to a change in practice, personal growth, or the context by conducting an AR study.





Design skills

Research design skills were developed and supported throughout the actual design of the AR study, including the rationale to select particular methods and accept and share feedback on the design. As part of the planning process, a student shared,

Prompting me to conduct this study and implement conversation sessions, is that the students have expressed a want for small group conversation activities because they feel that there is not enough time in class. In hoping to give students what they want, it is also beneficial to understand the benefits/outcomes that it does have.

Through their research design plan, the doctoral students selected the appropriate tools to collect data based on their context and research questions. The AR course also included other opportunities for research skills to be developed, a researcher's journal was used to capture anecdotal notes, exit slips were completed following each doctoral strand meeting, and students completed a final research paper at the conclusion of the course. Some of these course assignments were also replicated in student-led projects as many design plans included exit slips, journals, and written surveys to capture the reflections of their own participants.

Students were often asked to critique or respond to the ideas of their peers. By critiquing others, they often reflected on their own projects and the challenges they faced. This reflection is evident in the following post by a student responding on the discussion board, "From your details, I recognize missed opportunities with what the students were doing academically. However, they seemed to have a full understanding of what was expected of their own behavior." Thoughtful questions were posed to define, extend, and clarify aspects of the study. A student posted "I really like the connections that you were able to make from your observation to theories/practices. This may show insight on what teachers utilize from their teacher preparation programs or trainings." For those new to action research, the critiques further developed and supported the skills necessary for research design.

Reflection skills

The second level of research skill development is the skill of reflection. Reflection was evident when examining both the design and justification of the doctoral students' study. A student noted,

There is value in learning from your own mistakes and not have anyone correct you along the way. As I move onto more research and my own dissertation I am much better off having already designed a study on my own. There is more to be learned from doing this on your own opposed to working with someone on his or her research study, as you never get the sense of ownership.

Reflection is a skill that is present throughout the research process, but AR secures its role by placing it within the traditional AR cycle. This course asked students to reflect not only on their projects but on their experiences as a researcher. One student shared, "Through critical self-reflection and coding, the research project allowed our authentic experiences to drive our study. This critical process alone challenges dominant paradigms, which would deny the 'participant' a right to authorship in the research process."

Implementation skills

The final research skill supported through this graduate AR course is the skill of implementation. Implementation skills occurred at two levels; first, students gained knowledge by independently implementing a research project and experiencing the challenges and success that accompany any study. Second, at the conclusion of their research, the doctoral students recorded notable evidence on the potential impact of the project's implementation on participants, the study context, and themselves as researchers. A student commented, "I fully believe with support from my findings that all students benefited from receiving specific written feedback." Another said, "On a larger scale, the study exemplifies the need for more research to be conducted in adult ESOL settings and with adult English Language Learners." Students recognized that further investigation or replication of their study would be beneficial to the field and commented on changes or design adaptions they would make within their final papers.

DISCUSSION

Opportunities for meaningful research experiences and safe places to "practice" are key instructional strategies that may be missing from doctoral programs. In this course, students had ownership over the topic selection and research design; they were not assisting a faculty member or reading about the research conducted by scholars in the field. Instead, they gained first-hand experience in both successes and failures as a solo researcher. Access can be an issue for action researchers when completing their research, however, students within this course were asked to complete their projects only for class use, not further publication. This may present a lower risk for participation for those granting access (principals, community leaders, etc.) and perhaps why students did not encounter any issues with permission, creating a safe place for both the researcher and the participant. Regardless of where doctoral students were in their programs, they struggled with issues regarding time, independent work, and study design in their action research projects. Through their reflections, students reported that they felt like stronger researchers following this course, even though they have all taken previous research courses. This is not an indictment of previous research coursework but an opportunity to elevate the students' research capacity using diversified courses. Even if the doctoral students do not pursue AR as a methodology for their dissertations, their skills in AR will transfer to the qualitative or quantitative realm, continuing to benefit them long after the class.

This AR graduate course supported the development of key research skills that will assist doctoral students in their own dissertation research. Skills of design, reflection, and implementation support their growth towards becoming an independent researcher. In the words of the instructor, "While being a PhD student is a journey and research ideas change throughout the program, this course has given these students another option for a dissertation and the experience as a researcher to help plan their project in the future." Lastly, while the impact of the course and their project was different for each student, there was a unified message of success shared by the doctoral students, which may impact their self-efficacy as a novice researcher. This study demonstrated that AR could be used in the newly evolving mixed methodology criteria of research that utilizes the best and most appropriate elements of both quantitative and qualitative methodologies. The value of this approach, coupled with the learning experiences of the students, demonstrate the benefits of AR coursework within a doctoral program.

CONCLUSION

This study raises questions regarding the viability of AR as a meaningful course option in doctoral programs based on the findings. A key component of the AR course in this project is for students to self-select their projects and complete the research and analysis process within the timeframe of the course. For many students, their first opportunity to be a solo researcher may not be until their dissertation, and this course offered them the opportunity to have a safe space to explore their ideas about research and reflect on their role and positionality as a researcher. Perhaps any independent research experience may accomplish some of these same goals, but we argue that both the reflective and personal nature of AR combined with the support of peers and an instructor within a course is key to scaffolding this type of learning.

This course challenged students to think about the role of the researcher and the power dynamics that accompany community and classroom research. Situated within a College of Education, many of our doctoral students study the systemic inequities that exist in today's classrooms, curriculum, and reform initiatives. A careful examination of how their research works with those involved in their studies supports notions of sustainable change in education and empowerment for the under-served populations that often serve as the subjects of research. The foundational ideologies of action research as a methodology help to build better researchers regardless of the methodologies they eventually choose for their dissertation. Just as we encourage classroom teachers to listen and incorporate the ideas of their students into their curriculum, perhaps it is necessary for us, as doctoral advisors and chairs, to examine the contribution our doctoral students can make to the ongoing discourse about the role of AR.

Limitations

The research team noted a few limitations of the study. A student sample size of seven was small yet included all doctoral students enrolled in the graduate course. In addition, the instructor of the course was also the principal investigator and participants might have been impacted by the power dynamics of a graduate course. The study also focused on students representing the College of Education at the same institution of higher education. With a larger sample size and participants from more than one college or institution may reveal additional data and further findings. Perceptions of action research coursework might also differ if the same graduate course was taught by different professors.

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