Online EdD Program Graduates' Persistence for Engaging in Ongoing Practitioner Research

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Abstract

Doctoral graduates are expected to use research skills learned during their programs. The literature that speaks to this—particularly in EdD programs—is sparse. This study examined attitudes and behaviors of recent graduates of a practitioner-based program regarding their continued engagement with action research. Findings indicated that graduates believe strongly in the value of conducting action research and that many continue to do so. An identified impediment was a lack of institutional support from superiors, which is often overcome via the intrinsic satisfaction realized. Recommendations are offered for this doctoral program, as well as for practitioner-focused doctoral programs in general.

Keywords: action research, leadership, practitioner research, doctoral education

Introduction

One important aspect of any graduate degree program is to provide students with advanced learning and skills that they will apply as they seek new professional positions or advancement with a current employer. In addition, it could be argued that any graduate degree program in education can be viewed as a research degree. In other words, among the various content-specific courses that make up graduate degree programs, students also typically complete at least one—and sometimes several—courses in research methodology. As faculty, we hope that they will learn how to read, use, and interpret published research studies—and perhaps even conduct their own research studies—as part of their future careers. Unfortunately, the literature regarding the extent to which the latter occurs is scarce, at best.

The general purpose of this study is to help to fill this void in the literature. Specifically, this study provides empirical data examining the extent to which graduates of an education doctorate program, focused on practitioners, continue to utilize the research skills—specifically, skills in conducting action research—that they were taught and were required to demonstrate as part of their doctoral degree program. Data including graduates' perceptions of action research as a viable means to solve contextualized problems of practice and to assist in data-informed decision making were gathered, along with data about various aspects of the action research process and context-specific characteristics that they believed either limited or encouraged their continued use of action research.

Related Literature

Research on doctoral program graduates and their continuing implementation of skills and knowledge they learned in their programs has been quite limited (Buss, 2019). Most of the existing studies tend to focus on satisfaction with the program graduates had completed, employment status, and/or satisfaction with employment (e.g., Boman et al., 2017; National Science Foundation, 2015). The extensive report authored by Boman et al. (2017) was conducted by the European Science Foundation and focused exclusively on graduates of PhD programs. Their report was largely a career-tracking study, although they did ask a handful of questions regarding graduates' current engagement in

research. Similarly, the National Science Foundation (2015) study of doctorate recipients referenced earlier focused on PhD recipients, and only in the fields of science, engineering, and health. Buss's (2019) summarization of a review of this literature aligned with these trends in that that most of the small number of existing follow-up studies on doctoral graduates focused on employment status, perceptions of program preparation, and salary.

Most of these types of doctoral follow-up studies fail to adequately track the achievement of programmatic outcomes. For example, the Council of Graduate Schools and Educational Testing Service (2012) surveyed deans regarding their levels of satisfaction with their institution's ability to track graduate student alumni outcomes and reported that 85% indicated that they were either dissatisfied or very dissatisfied with their institutions' efforts in this regard.

One exception to this void is a study conducted by Buss (2019), where he surveyed and interviewed graduates of a face-to-face EdD program. He focused his data collection on graduates' continued use of scholarly practitioner abilities and inquiry skills and procedures that they learned during their program. He concluded that most participants in the study were continuing to engage in the use of scholarly practice approaches to their work. In addition, he stated that they were continuing to employ inquiry methods to solve problems of practice and were also disseminating their work. The current study is an attempt to add to the work of Buss (2019) and to further fill this void in the research literature regarding the continued use and practice of action research by EdD graduates as an integral and influential aspect of professional work, contextualized problem solving, and data-informed decision making.

Background and Research Context

Participants in this study were graduates of the EdD Program in Leadership and Innovation in Mary Lou Fulton Teachers College (MLFTC) at Arizona State University. This doctoral program is a cohort-based, 3-year program that has been influenced heavily by various design concepts of the Carnegie Project on the Education Doctorate (CPED; Carnegie Project on the Education Doctorate, 2021a). CPED is a consortium of more than 120 colleges and schools of education at institutions of higher education in the U.S., Canada, and Ireland. The collective work of the consortium is focused on critical examination, dialog, evaluation, feedback, and redesign of its education doctorate (i.e., EdD) programs. Three of these design concepts are especially important to the EdD program in MLFTC. These include the following:

- The development and nurturing of scholarly practitioners "Scholarly Practitioners blend practical wisdom with professional skills and knowledge to name, frame, and solve problems of practice. They use practical research and applied theories as tools for change..." (CPED, 2021b, "Design Concepts Upon Which to Build Programs," par. 2)
- The implementation of inquiry as practice "Inquiry as Practice is the process of posing significant questions that focus on complex problems of practice. By using various research, theories, and professional wisdom, scholarly practitioners design innovative solutions to address the problems of practice." (CPED, 2021b, "Design Concepts Upon Which to Build Programs," par. 5)
- The focus of inquiry efforts on specific problems of practice "A Problem of Practice is as a persistent, contextualized, and specific issue embedded in the work of a professional practitioner, the addressing of which has the potential to result in improved understanding, experience, and outcomes." (CPED, 2021b, "Design Concepts Upon Which to Build Programs," par. 7)

The connection to and influence of CPED is extremely important to the focus of this study. The faculty of the EdD program, in efforts to achieve these design concepts previously discussed,

designed a doctoral program that utilizes action research as a central, guiding design component of the program. It is through the use and integration of action research that students in the program develop across the three years as *scholarly practitioners*. They do this through the implementation of *inquiry*, in the form of action research, as an integral part of their professional practice. Finally, their action research efforts are focused on specific, self-identified *problems of practice* which exist in their contextualized workplace settings.

Action research is an ideal fit for achieving these programmatic goals. First, action research is eminently suitable for practitioners who are enrolled in an EdD program (Osterman et al., 2014). Andrews and Grogan (2005) stressed that the Doctor of Education degree was initially designed for applied research, as opposed to original research, and should be organized around contextualized problems of practice. Second, the main goal of action research is to address local-level problems in practice with the anticipation of finding immediate answers to questions or solutions to those problems (Mertler, 2018). When considering any form of *practitioner inquiry*, we are referring to a type of applied research in education that is entirely about the practitioner and their desire and need to study their own practice (Mertler, 2021). We are not talking about university professors and researchers or staff from a national research firm going into educational institutions and conducting research on topics that *they* are interested in studying. Applied research—in the form of action research—is educational research that is focused on solving a specific problem. Action research and practitioner inquiry could be considered the *epitome* of applied educational research (Mertler, 2013, 2020a). They are arguably the most effective and practical approach to solving contextualized organizational problems and answering related questions (Mertler, 2020b).

In the EdD Program in Leadership and Innovation, students are required to conduct action research dissertations. In addition, they engage in three to four earlier, preliminary cycles of action research that lead up to and inform their ultimate dissertation research studies. These earlier cycles of action research are part of course assignments and are embedded in the work within those courses. The cycles include a reconnaissance cycle—where students are charged with trying to learn more about the nature of the problem they have identified, including the perspectives of colleagues on that problem—as well as additional cycles where they pilot test data collection instrumentation, interview protocols, and potential innovations. Their ultimate dissertation research involves the development of an innovation or intervention that they implement and then assess its effectiveness regarding solving—or, at least, partially solving—their self-identified problems of practice. Various coursework, inquiry strategies, and cycles of action research in the EdD Program are summarized in Table 1.

Table 1. Coursework, Inquiry Strategies, and Cycles of Action Research in the EdD Program

Term and Course(s)	Course Content to Develop Inquiry Skills	Action Research Activity
Term 1: TEL 706—Action Research in Doctoral Studies	 Developing understanding of AR Considering, articulating, and refining a Problem of Practice (PoP) Writing research questions (RQs) Identifying and considering initial research literature (w/ TEL 707) 	 Action Research Concept Paper: Developing a preliminary PoP Contextualizing the PoP Drafting initial RQs
Term 2: TEL 711—Strategies for Inquiry	 Developing understanding of quantitative and qualitative research Developing background on theories (w/ 703) Building skill reading the literature Designing on initial interview or survey. 	Action Research Cycle 0: Conducting reconnaissance Gathering information and writing up reconnaissance study Action Research Planning for Cycle 1:
	 Designing an initial interview or survey Writing about context, theories, related literature, and initial methodology 	Clarifying and writing about the context

	Considering and developing an initial intervention/innovation	 Reviewing and writing about theoretical frameworks guiding the project Designing initial intervention/innovation Designing preliminary action research study
Term 4: TEL 712—Mixed Methods of Inquiry	 Developing mixed-method research skills Extending interviewing and survey skills Developing initial qualitative analysis skills Developing initial quantitative analysis skills using SPSS 	 Action Research Cycle 1: Extending Cycle 0 Developing/revising intervention and data collection procedures Revising RQs Implementing Cycle 1 study using a small-scale intervention
Term 5: TEL 701—Quantitative Methods in Action Research	 Extending mixed-method research skills Extending interviewing and survey skills Extending qualitative analysis skills Extending quantitative analysis skills using SPSS 	Action Research Cycle 2: Extending Cycle 1 (or putting on hold) Revising intervention and data collection procedures Revising/extending RQs
TEL 713— Qualitative Methods in Action Research	Learning to use qualitative analysis software (using HyperResearch)	Implementing Cycle 2 study
TEL 792—Research in the Leader-Scholar Community (1)		
Term 7:	Extending mixed-method research skills	Action Research Cycle 2.5:
TEL 792—Research in the Leader-Scholar Community (2)	 Extending interviewing, survey, etc. skills Extending qualitative analysis skills Extending quantitative analysis skills 	 Extending Cycle 2 (or putting on hold) Revising intervention and data collection procedures Revising/extending RQs Implementing Cycle 2.5 study (Defend dissertation proposal)
Terms 8-10 :	Applying mixed-method research skills	Action Research Cycle 3:
TEL 799—Dissertation Research in the Leader- Scholar Community (3/4)	 Applying interviewing and survey skills Applying qualitative analysis skills Applying quantitative analysis skills 	 Extending Cycles 1, 2, and 2.5 Fully extending previous cycles Implementing Cycle 3 study— Dissertation in Practice (Defend final dissertation)

Purpose of the Study and Guiding Research Questions

The purpose of this study is to investigate the extent to which graduates of an online doctoral program in Mary Lou Fulton Teachers College (MLFTC) have continued to use research skills taught to them and reinforced during their time in this doctoral program. Students in the EdD Program in Leadership and Innovation in MLFTC are taught the process of practitioner research, more specifically referred to as *action research*. Not only do they study the research process, but they engage in several cycles of action research leading up to and including their action research dissertations, as was previously discussed above. Since these students are *scholarly practitioners*—and not academics who move into higher education settings as faculty and/or researchers—it is the hope of the faculty that they continue

to engage in this form of practitioner research throughout the remainder of their careers. Findings from this study could help guide revisions in this doctoral program moving forward. In addition, very few studies have looked at the application of research skills following the completion of a practitioner doctoral program, and this study will help to fill that gap in the body of literature related to this topic.

The research questions that guided this study are as follows:

- 1. What are the ongoing perceptions held by graduates of an online EdD program regarding the use of action research in their workplace context?
- 2. How and to what extent are graduates of an online EdD program continuing to engage in the process of conducting their own action research studies?
- 3. What aspects of the action research process or of their workplace contexts either encourage or discourage the use of action research as a problem-solving strategy?
- 4. What differences in graduates' perceptions of or use of action research exist between different demographic groups?

Methods

Participants

The population (N = 98) for this study was comprised of graduates from the online EdD Program in Leadership and Innovation. All students graduated between 2018 and 2021. Participation on the part of the graduates consisted only of them completing an electronic survey. It was initially estimated that the survey would take approximately 15–20 minutes for them to complete. Following the four-week data collection period, two-thirds (n = 66) of the EdD graduates had completed and submitted their survey responses for a response rate equal to 67%.

The final sample was comprised of roughly 67% female and 33% male doctoral graduates. A majority (39%) completed the program in 2019, while 27% completed it in 2021, 21% in 2020, and 12% in 2018. Substantially more than half (61%) were currently working in higher education settings, 20% were working in PK-12 settings, 6% were in nonprofit educational organizations, and the remaining 13% were fairly evenly divided between various for-profit and nonprofit organizations, both education and non-education related. Thirty-five percent indicated that they worked as faculty or teachers, while the majority of those remaining stated that they worked in either upper-level management roles (29%) or middle-level management roles (24%).

Instrumentation

An original survey instrument was administered electronically as a Google Form for collecting all data. The instrument was comprised of a total of 49 forced-choice items and five open-ended items. The complete instrument has been provided in the Appendix.

The first section asked for demographic information, including the year of graduation, current workplace context, current position in that workplace, and gender identity. The next section, consisting of 10 items, asked respondents to indicate their level of agreement on a 5-point Likert scale with statements about the relative value of action research (e.g., "Action research is a viable means to address and solve problems of practice."). The next two sections asked respondents to think back to the time *when* they were enrolled in the EdD program. The first of these asked respondents to indicate their perceived level of difficulty on a 4-point Likert-type scale of various aspects of the action research process (e.g., "Specifying the problem of practice" and "Stating quality research questions"). The second of these asked them to indicate which of various forms of research dissemination they had sought out following their dissertations.

The next several sections ask the graduates to respond to similar sets of perceptions and behaviors in which they had engaged *following* the completion of the EdD program. The first item here simply asked them to indicate the number of action research studies they had undertaken since completing the program. This was followed by an optional open-ended item where they were asked to explain why they had not conducted any studies if they responded "none" to the previous question. They were then asked the same set of forced-choice items regarding their perceived levels of difficulty with respect to aspects of the action research process, and to indicate any dissemination strategies in which they had engaged.

The final section of the survey provided open-ended items. The first asked them to describe any aspects of their current work context that prevented or discouraged the use of action research. The next asked them to describe any aspects of their work context that they felt promoted or encouraged the use of action research. The third question asked them to discuss any aspect of the action research process that they found more challenging than others. The final question asked them to share anything else about their professional use of action research that they had not previously been asked in the survey.

Reliability of Resultant Data

There were five subscales across the instrument. The "value of action research during the program" subscale consisted of 10 items (α = .69), the "difficulty of action research during the program" subscale consisted of 11 items (α = .82), the "dissertation research dissemination" subscale consisted of six items (α = .51), the "value of action research following the program" subscale consisted of 11 items (α = .98), and the "subsequent dissemination of action research" subscale consisted of six items (α = .78). The entire instrument consisted of 44 forced-choice items and demonstrated excellent reliability (α = .90).

Procedures

Following IRB approval, the researcher requested that staff who work with the EdD Program compile a list of email addresses for graduated students from their internal database. The author sent out the cover/consent letter in the form of an email to both their ASU and personal email addresses. It is important to note that ASU allows all graduates of the institution to maintain their ASU email addresses following graduation from a particular program. Since each graduate also had a personal email address on file, the researcher felt it was important to send the email cover letter to both sets of email addresses, in the case that graduates were no longer checking their ASU account. The email contained the survey's cover letter and a hyperlink to the electronic survey. Participants were given four full weeks to respond to the survey. Following the initial distribution of the consent email, reminder emails went out to all non-respondents at the one-week, two-week, and three-week marks. Data collection ceased exactly four weeks from the date of initial distribution of the consent email. Analyses of quantitative data were completed using SPSS version 28 (IBM Corp., 2021) and consisted of descriptive strategies (i.e., frequencies and percentages of response), as well as chisquare tests for independence to test relationships between content-specific items and various demographic variables, as data were gathered at the nominal and ordinal levels of measurement, therefore calling for the use of nonparametric tests (Gravetter & Wallnau, 2013). Statistical significance of the association between each pair of tested variables was evaluated at an alpha level equal to .05 (i.e., $\alpha = 0.05$). Qualitative data resulting from open-ended items were analyzed using an inductive process of organization, description (coding), and interpretation (Parsons & Brown, 2002).

Results

Sixty-seven percent (67%) of graduates surveyed provided complete sets of responses to the survey. The results are presented below, organized by the four guiding research questions.

Research Question #1

What are the ongoing perceptions held by graduates of an online EdD program regarding the use of action research in their workplace context?

Participants were provided with 10 statements about action research and asked to indicate their level of agreement with each. These results are summarized here and provided in detail in Table 2.

Generally speaking, graduates of the EdD program at ASU agreed that situated action research is a beneficial and meaningful activity in which to engage as part of their professional work. When asked to indicate agreement with the statement "action research is a viable means to address and solve problems of practice," 97% either agreed or strongly agreed. Further, 86% agreed that "action research is a professional activity that I am able to conduct as part of my job" and 83% agreed or strongly agreed that "I am able to integrate action research into my professional responsibilities." There was also overwhelming agreement with the statements "The results of my action research endeavors provide guidance for my professional decision making" (91%) and "Investigating my own problems of practice through action research has enhanced my professional practice" (92%). In like manner, 68% disagreed or strongly disagreed with the statement that action research was too time-consuming to integrate into their work, and 93% disagreed or strongly disagreed that they had no desire to engage in action research as part of their work.

Although the participants were very positive about the overall benefits and importance of action research to their professional work, they also indicated that aspects of their specific workplace contexts were often limiting factors when it came to implementing action research. For example, 47% of respondents either strongly disagreed, disagreed, or neither agreed nor disagreed with the statement that their supervisor(s) respected the action research work that they did. Similarly, 41% either strongly disagreed, or neither agreed nor disagreed with the statement that their colleagues respected the action research work that they did. Regardless of the perceived support they receive, graduates of the EdD program were overwhelmingly positive about not only the potential, but also in terms of actual results, for action research to benefit, strengthen, and contribute to the work they are responsible for performing.

Table 2. Frequencies and Percentages of Response for Graduates' Perceptions of Action Research

Statement	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Action research is a viable means to address and solve problems of practice.	2	0	0	13	51
	(3.0%)	(0.0%)	(0.0%)	(19.7%)	(77.3%)
Action research is a professional activity that I am able to conduct as part of my job.	2	1	6	27	30
	(3.0%)	(1.5%)	(9.1%)	(40.9%)	(45.5%)
I am able to integrate action research into my professional responsibilities.	2	3	6	30	25
	(3.0%)	(4.5%)	(9.1%)	(45.5%)	(37.9%)
The nature of my work limits my abilities to engage in ongoing action research.	12	23	15	10	6
	(18.2%)	(34.8%)	(22.7%)	(15.2%)	(9.1%)
The results of my action research endeavors provide guidance for my professional decision making.	2	2	2	35	25
	(3.0%)	(3.0%)	(3.0%)	(53.0%)	(37.9%)
Investigating my own problems of practice through action research has enhanced my professional practice.	2	0	3	25	36
	(3.0%)	(0.0%)	(4.5%)	(37.9%)	(54.5%)

Action research is too time-consuming for me to integrate into my work.	14	31	16	4	1
	(21.2%)	(47.0%)	(24.2%)	(6.1%)	(1.5%)
My supervisor(s) respect the action research work that I do.	1	8	22	15	20
	(1.5%)	(12.1%)	(33.3%)	(22.7%)	(30.3%)
My colleagues respect the action research work that I do.	1	4	22	21	18
	(1.5%)	(6.1%)	(33.3%)	(31.8%)	(27.3%)
I have no desire to engage in action research as part of my work.	37	24	4	0	1
	(56.1%)	(36.4%)	(6.1%)	(0.0%)	(1.5%)

Note: n = 66

Research Question #2

How and to what extent are graduates of an online EdD program continuing to engage in the process of conducting their own action research studies?

To address Research Question #2, participants were provided the opportunity to indicate their perceptions of the level of difficulty of various aspects of the action research process, both during their action research dissertations and for any action research studies they had conducted after completing the doctoral program. They were also asked questions regarding their use of various outlets to disseminate their action research work.

During their dissertation work in the doctoral program, a majority (56.1%) of respondents indicated that the most difficult aspect of the action research process involved the analysis of their data. This was closely followed by the development of quality research questions (48.5%), developing or identifying data collection instruments (44.0%,) and the specification of a research plan (43.9%). They indicated that the least difficult aspects of the process involved reflecting on the action research process (10.6%), followed by sharing the results of action research (15.2%), and developing an action plan for practice and gathering related literature (both at 22.7%). In terms of dissemination strategies, most of the respondents relied on less formal means of disseminating the results of their dissertations. The vast majority (81.8%) indicated that they presented the results of their dissertation studies to supervisors and/or colleagues. Similarly, 71.2% indicated that they shared a written summary with supervisors and/or colleagues. Slightly more than half (54.5%) indicated that they presented the results at a formal conference, while less than half (43.9%) reported indicated that they wrote or published a formal report of their dissertation research. A substantially smaller proportion of the respondents indicated that they shared the results electronically via blogs, vlogs, websites, etc., or social media (21.2% and 19.7%, respectively).

Participants were then asked to indicate the number of action research studies they had conducted following the completion of the doctoral program, and to indicate their perceptions of difficulty regarding various aspects of the action research process, but this time focusing only on those studies that *followed* their graduate work. A majority (30.3%) indicated that they had not conducted any research studies since completing the doctoral program. This was followed by those who had conducted one study (28.8%), two studies (22.7%), three studies (10.6%), four studies (6.1%), and six or more studies (1.5%). The nearly one-third of the respondents who indicated that they had not conducted any additional studies were asked to indicate reasons why they had not done so. A majority of those (n = 15, 75%) responded that they did not have the opportunity to conduct action research or had no time to do so within the parameters of their job responsibilities. Some indicated that this was a result of having a new job or simply needing a break from research after having just graduated from the doctoral program within the last few months. One participant shared the following:

It's not that long since completing the degree, and rather than dive immediately into research, I'm relishing a break.

Six participants indicated that the major impediment to conducting action research lied in limitations inherent within their specific work contexts. Several participants indicated that this was due largely to a lack of support or bureaucratic limitations:

My department has not been exactly supportive of such efforts.

Another participant indicated the following:

Shift of positions into a not-so-supportive work environment where supervisors are used to telling staff what to do and how to do it, instead of an exploratory approach.

A third participant shared that a lack of respect and bureaucratic limitations were preventing any further action research work:

The administrative makeup at my campus changed drastically and has no respect for faculty engaging in research. Our IRB was disbanded and the only people allowed to [conduct] research are in the Research Office.

However, one participant was hopeful that a change in jobs would create more opportunities for action research:

I was working in a corporate environment with limited access to company data and approvals for research. Now working in a nonprofit, I hope to conduct action research projects.

Finally, only three participants cited COVID as a cause of not engaging in new research, while two participants shared the fact that they felt that they do conduct research regularly, although they would not consider it to be "formalized action research." As an example of this latter explanation, one participant said the following:

While I have been conducting what I would consider informal cycles, I have not set aside the time to do a formal review of the literature nor a formal analysis of results.

When asked to indicate the difficulty level of various aspects of the action research process following their completion of the doctoral program, many of the participants reported that they did not engage in any of the steps of the action research process on a regular basis. Based on the particular activity of the research process, these percentages of response ranged from 27.3% to 42.4%. For those who did regularly engage in the action research process and conduct additional studies, they seemed to struggle most with formalizing a specific research plan (25.8%), developing or identifying data collection instruments (25.8%), and analyzing resulting data (22.7%).

Finally, the data revealed that participants were not engaging in many strategies to disseminate the results of follow-up action research studies. For example, 81.8% reported that they had not written a formal report and 78.8% indicated that they had not presented the results at a conference. Roughly half (57.6% and 50.0%, respectively) had shared a written report with colleagues or presented the results of action research to colleagues. Virtually all (92.4%) of the respondents had not availed themselves of various electronic or social media forms of dissemination.

Research Question #3

What aspects of the action research process or of their workplace contexts either encourage or discourage the use of action research as a problem-solving strategy?

The data which served as the basis for answering this research question came from two open-ended items on the survey instrument. Data were coded into broad-based themes that served to categorize

responses. The first of these asked participants to describe aspects of their work or context that *prevented* or *discouraged* the use of action research. Fifty-nine (89%) of the 66 respondents provided responses to this question. The four themes resulting from the coding process included:

- 1. Lack of time/workload limitations
- 2. Lack of support or familiarity with the action research process
- 3. Aspects of the action research process
- 4. Informal conduct of action research

Each of the four themes will be discussed, with sample quotes demonstrating the nature of participant responses.

Discourage Action Research Theme #1: Lack of time/workload limitations. Most of the responses (n = 30) to this question were categorized under this theme. By far, the most common response dealt with the simple fact that participants did not feel they had the time necessary to conduct action research due to their required job responsibilities. For example, one participant explained that the workload had only increased because of the pandemic:

Workload! My desire is to continually engage and improve my practice of [action research], but I teach and work at a non-research institution. Especially since the pandemic began, workload has increased to a level which makes it challenging.

Another respondent indicated that, in addition to job responsibilities, decisions often need to be made quickly and that seemed to conflict with the action research process:

In areas where I need to make decisions on a tight time frame, I am discouraged from using action research.

Another respondent's comment supported this sentiment by noting the time requirements of conducting action research, specifying that this was the lone crucial factor in limiting their ability to conduct research:

The only aspect of my work that discourages contextualized action research is the time for planning and implementation.

Several others also noted the difficulty in finding necessary blocks of uninterrupted time for action research:

Engaging in action research or really any scholarly activity takes blocks of devoted and uninterrupted time, and it's just difficult in my environment to find those moments.

One final example quote to support this theme stressed the fact that they felt that engaging in action research was beyond the basic and primary scope of their job:

Expectations are that faculty take on more work for the same pay and workload allotment. Makes it very difficult to go above and beyond time and time again.

Theme #1 can best be summarized by stating that, while the participants clearly valued the process of conducting the action research, many felt they simply did not have time to integrate quality action research studies into their current job responsibilities. Many felt it was important to do justice to the process, which they believed requires time and energy. They did not want to rush through the process of conducting the action research but were unable to allocate designated blocks of time to develop and implement action research studies.

Discourage Action Research Theme #2: Lack of support or familiarity with the action research process. A reasonable number of respondents (n = 14) shared that their biggest hindrances in terms of conducting action research came because of a lack of support within their context or a lack of familiarity (on the part of supervisors or colleagues) with the action research process. For example,

one respondent indicated that upper-level administrators do not recognize the value inherent in action research and, therefore, do not provide incentives for their employees:

[Action research] is not something that is necessarily recognized by upper administration as worthy of a teaching buy-out.

This sentiment was also echoed by a respondent who was employed in a school district, specifically stating that no benefits or incentives are provided to anyone who conducts action research:

Doing action research is not something that is part of the norm for district-based employees. No benefits are given to a person conducting action research for a district-based employee (e.g., salary increases, extra time to complete).

Several other comments stressed that there simply was no interest at the administrative level in encouraging employees to conduct action research. In some cases, as indicated by several participants, it was expressed as not being a priority in the day-to-day work of the organization:

It is not valued by my supervisor and as an administrator we often are putting out fires instead of planning to prevent.

Supervisor uninterested in change.

There are many projects and tasks that take time and effort, which are paramount to our work and action research isn't necessarily prioritized.

One respondent indicated that they were discouraged from conducting actual research because others in their field are not familiar with the process—or with educational research, in general—and this has made collaborative work very difficult:

Others in my field are not familiar with action research or educational research, so finding collaborators has been challenging.

One final respondent stated it more bluntly, by indicating that not only is action research not supported, but it is also outwardly frowned upon:

My campus simply does not want faculty engaging in this work & strongly discourages it.

Theme #2 is best characterized by the fact that many respondents felt that their upper administration did not value—or possibly even understand—the value and process of conducting action research. They did not see it as something worth doing, perhaps even overtly discouraging its practice. It did not seem to be prioritized in many settings, and many supervisors were content to solve problems using the same strategies that they had used in the past. They appeared to be uninterested in the change that can be brought about through a process like contextualized action research.

Discourage Action Research Theme #3: Aspects of the action research process. A small number of respondents (n = 5) identified various aspects of the action research process that unintentionally prevented their ability to conduct action research, based on various characteristics of their workplace contexts. These reasons included things such as being unable to collect certain kinds of data or use specific strategies for data collection, in addition to the difficulties associated with securing permission to conduct action research studies:

Being in a district prevents me from being able to do some of the pieces I would like—using certain instruments and data collection often need a series of approvals that are too cumbersome to try and get done sometimes.

Similarly, another respondent indicated that there is oftentimes difficulty due to a changing environment and not being able to gather relevant and pertinent data that can assist in problem-solving initiatives:

Changing environment [and] difficulty in gathering relevant and actionable data.

While there certainly were not as many responses that supported Theme #3, it nonetheless revealed important aspects of the action research process that limit many employees' ability or desire to conduct action research.

Discourage Action Research Theme #4: Informal conduct of action research. Although only a handful of responses (n = 5) to this question were categorized under this theme, it bears discussion—primarily because it relates back to Theme #1. Recall that the focus of Theme #1 was a lack of time for participants to be able to conduct quality action research. Although some respondents found a way around this by conducting scaled-down versions of action research, they still identified doing so as a hindrance to the process, since it was not being implemented or conducted with fidelity. One respondent indicated that they did not experience an aversion to conducting action research, but rather employed a version of action research that focused only on the effectiveness of decisions and ways to adjust those decisions moving forward:

Even in those instances though I like to employ a version of action research in continually assessing the decision and making adjustments based on new information.

One final quote virtually serves to summarize this entire theme by noting the nature of a scaled-down version of action research:

I'd say what I am able to do now is "AR Lite".

Like Theme #3, Theme #4 also had a small number of responses that served as its basis. However, it is important to note that even though these respondents felt that they were managing to implement a somewhat "quicker-and-easier" version of action research, they still saw it as a limitation to what the full action research process could do for them with respect to their self-identified problems of practice in their workplace contexts.

The second open-ended question asked participants to describe aspects of their work or context that *promoted* or *encouraged* the use of action research. Forty-eight (73%) of the 66 respondents provided responses to this question. The three themes resulting from the coding process included:

- 1. *Institutional support*
- 2. Self-motivation/personal value
- 3. Outside interest/bring others to action research

Each of the three themes will be discussed, with sample quotes demonstrating the nature of participant responses.

Encourage Action Research Theme #1: Institutional support. More than half (n = 26) of the responses to this question were coded into this theme. For those respondents who felt successful in conducting action research, many stated that the best encouragement that they received was a result of various forms of support at different levels within their institutions. The most impressive and comprehensive example of support came from one respondent who said:

I was able to work with our promotion task force to implement the use of action research as a required component of our promotion process to full professor. We now have a standing, college-wide committee to support faculty in their action research. We have librarians and members of the IRB on our AR committee to develop a consistent message for faculty and support each other's roles in the process. We also host AR workshops ... to teach faculty about the action research process.

A respondent indicated that support from administration consisted of the provision of time or fewer responsibilities so that time and energy could be devoted to action research:

Encouragement from admin. Time or less responsibilities in order to focus on action research.

Another respondent indicated that they had simply been granted freedom to explore ways to improve their professional practice:

Freedom to implement action research to benefit my practice.

One respondent even indicated that they had experienced the implementation of an official policy with a focus on action research:

Official policy in place that encourages action research as part of organizational practice.

All this being said, a final sample quote indicates that even though support had been granted by their administration, there remained some hesitancy on their part:

Leadership does see the benefits but is unsure of how much work it will take.

From the responses that were coded into Theme #1, it is obvious that many respondents are situated in organizations where there is administrative support for conducting action research. It is clear that these respondents felt encouraged by their supervisors and other administrators to engage in the research process for the benefit of their work and their organizations.

Encourage Action Research Theme #2: Self-motivation / personal value. Many additional responses (n = 14) to this question were coded into this theme focused on an individual's self-motivation or perceived personal value and benefits from conducting action research. Many of these responses indicated that the participants felt a sense of intrinsic motivation associated with conducting action research studies that examined aspects of their own professional practice. For example, one respondent discussed the fact that they were presenting at professional conferences and enjoyed the opportunity to discuss their work with colleagues, both inside and outside of their home institution, and that this was a rewarding activity:

I also love presenting my work at conferences. Since I graduated in May 2020, I have presented my work at my field's major conference, a major international teaching conference, a regional conference for my field, and a small conference (total of 4 conferences). I have also discussed my work with colleagues outside my workplace in smaller, organized meetings. I feel prepared and competent when talking with faculty at my institution or others about their research as well my own. It's very exciting and rewarding.

Another indicated the fact that action research was central to the work that they conducted on a regular basis:

Cycles of action research are at the heart of my current work.

A final example within this theme demonstrates the nature of this intrinsic motivation attached to action research:

I have always been the type of professor who is constantly looking for how to improve at my craft. And I enjoy presenting at conferences. So, these are the primary drivers for pursuing action research in my future.

Theme #2 is best characterized by the focus on intrinsic motivation. Responses within this themed category do not focus on external rewards—such as release time, additional pay, etc.—that could be realized received from administrators or their organizations. Rather, they chose to receive their

encouragement from within themselves and from the personal benefits that they believed they could realize from engaging in action research.

Encourage Action Research Theme #3: Outside interest/bringing others to action research. Support for this final theme came from a smaller, albeit important, set of participants (n = 8). This theme focused on the idea that participants in this study felt encouraged by people outside of their specific locus of control, and especially when they could bring others who might be novices with respect to action research, into its processes. For example:

There are some colleagues who are interested in working on action research projects and I have one started currently. Finding action research collaborators and champions is important.

Both this person as well as the individual providing the next quote valued the nature and importance of collaboration in action research:

I work with a small number of colleagues, and we all wear several "hats," so we are often working collaboratively to address problems of practice.

This final theme is best characterized by the fact that action research is often done collaboratively. Therefore, these respondents found encouragement from finding others in their organizations who were interested in engaging in the action research process to solve collaborative or broader-based problems of practice.

Research Question #4

What differences in graduates' perceptions of or use of action research exist between different demographic groups?

Items that addressed graduates' perceptions of action research, their challenges with aspects of the process and dissemination strategies during their dissertation work, and challenges and dissemination strategies following completion of the program were tested against the four demographic variablesyear of graduation, workplace context, professional position, and gender—to assess the presence of significant associations between variables. All these bivariate associations were tested using chisquare tests of independence ($\alpha = 0.05$). Unfortunately, the interpretation of many of these results was ill-advised, since the proportion of cells in various contingency tables had expected frequencies less than five. This is a crucial issue when interpreting the results of chi-square analysis since a situation is created where a minor discrepancy between the observed and expected frequencies can result in a large and oftentimes statistically significant—but meaningless—chi-square value. Chi-square tests are simply too sensitive when the expected frequency values are extremely small (Gravetter & Wallnau, 2013). The conventional rule of thumb for this occurrence is that the proportion of cells with expected frequencies less than five should not exceed 20%; most of the bivariate analyses in this study resulted in contingency tables with 80% to more than 90% expected counts less than five. In cases where the expected cell counts exceeded the 20% threshold but were not as excessive as those described above, the variables were subjected to an exact test of association (as advised by McDonald, 2014) and the results of those five significant tests are reported here and are summarized in Table 3.

The only significant chi-square result for the perceptions of action research items occurred for gender and the statement "investigating my own problems of practice through action research has enhanced my professional practice," $\chi^2(3, n = 66) = 8.75, p = .019, V = .36$. Specifically, female participants agreed more strongly with this statement than did their male counterparts. In addition, based on criteria for interpreting the effect size as measured by Cramér's V provided by Cohen (1988), the effect size of V = .36 indicates a moderate relationship between gender and perceptions of the extent to which investigating one's own problems of practice through action research enhances professional practice.

All remaining significant chi-square results centered around the notion of disseminating the results of action research. First, year of graduation was significantly associated with "presenting the results (of my dissertation) at a conference," $\chi^2(6, n = 66) = 15.63, p = .018, V = .34$, representing a large effect. Substantially more graduates from 2021 presented their dissertation results at a professional conference than did those from the other three graduating years. Second, gender was significantly associated with "shared a written summary (of my dissertation) with my supervisor(s) and/or colleagues," $\chi^2(2, n = 66) = 6.30, p = .025, V = .31$, indicating a medium effect. Males shared written reports of their dissertation research with their colleagues substantially more than did female participants. Third, year of graduation was also significantly associated with "presenting the results (of subsequent action research studies) to my supervisor(s) and/or colleagues," $\chi^2(6, n = 66) = 13.91$, p = .017, V = .33, indicating a medium effect. Graduates from 2018 and 2019 presented results of subsequent studies more often than those from 2020 and 2021. Fourth, and finally, gender was significantly associated with "shared a written summary (of subsequent action research studies) with my supervisor(s) and/or colleagues," $\chi^2(2, n = 66) = 7.25, p = .021, V = .33$, indicating a medium effect. Male graduates shared written summaries of subsequent studies far more than female graduates.

Table 3. Summary of Significant Chi-Square Tests of Independence

Demographic Variable	Content Variable (Survey Item)	χ^2	df	p	Effect Size (V)
Gender	Investigating my own problems of practice through action research has enhanced my professional practice	8.75	3	.019	.36
	Shared a written summary (of my dissertation) with my supervisor(s) and/or colleagues	6.30	2	.025	.31
	Shared a written summary (of subsequent action research studies) with my supervisor(s) and/or colleagues	7.25	2	.021	.33
Year of Graduation	Presenting the results (of my dissertation) at a conference	15.63	6	.018	.34
	Presenting the results (of subsequent action research studies) to my supervisor(s) and/or colleagues	13.91	6	.017	.33

Note: n = 66

Discussion

As teachers—at virtually all levels of education—it could be argued that we collectively hold sincere hope that our graduates use the knowledge, skills, and dispositions that we teach them during their times with us as they venture into or seek to advance in their own careers. This is certainly true for the faculty who teach in the EdD Program in Leadership and Innovation at ASU. A signature pedagogy of our program is the integration of action research into coursework and dissertation research. Our faculty strive to make clear to our students the importance of action research as a means to solve problems of practice through a systematic, strategic, and scientific approach.

Salient findings from this study include the fact that doctoral graduates strongly supported the notion that action research is a viable means to solve problems of practice and that it is an activity that many can conduct as part of their jobs. Most graduates clearly believed that action research provides

beneficial guidance for professional decision-making and has enhanced their professional practice. Additionally, findings from this study indicate that while many of the participants believed that they had strong institutional support, a greater number felt that they did not. This may have been a simple byproduct of not being provided adequate time to conduct research, although there appeared to be instances where the lack of support was much stronger—namely that graduates were told by their supervisors that they were *not* to conduct action research on work time. This fact was the overwhelming cause of discouragement or prevention from being able to conduct action research studies. This finding was consistent with the literature on practitioner-based action research (e.g., Mertler, 2013, 2018) and reinforces the importance and critical need for support. Administrative support can best be developed through a thoughtfully designed and comprehensive infrastructure to support action research as professional development (Mertler, 2013).

However, it seemed apparent that a degree of encouragement that outweighed those discouraging factors could be achieved through internal motivation and the perceived personal benefit of conducting an action research study on one's own practice. In addition, the idea of collaborating on action research studies provided additional encouragement for many graduates. This is likely due largely to the fact that it somewhat counteracts the issue of limited time availability if various responsibilities of an action research study can be divided up and shared amongst a team of practitioners. This, coupled with the fact that a team offers its own degree of support to each member, could reduce the negative effects of a lack of administrative support, provided that the practice of conducting action research is not overtly prohibited.

While they continue to find many aspects of the action research process relatively straightforward, many still struggle with issues related to data collection, data analysis, and stating quality research questions that assist them in guiding and developing subsequent action research studies. Interestingly, the notion of collaboration and collaborative action research can also be a proactive way of addressing individual relative weaknesses or levels of discomfort with the action research process. In other words, working with a team of colleagues could enable colleagues to contribute to the process wherever their individual strengths lie, without feeling the need to be able to do *all* aspects of the research process in isolation and without support. The notion of a professional learning community that is focused on the implementation of collaborative action research—known as an *action research community* (Author, 2018)—can lead to an applied, context-specific approach to professional development through action research. There lies strength in numbers.

This study has added to the body of literature on doctoral graduates' subsequent use and implementation of research skills and has helped to fill the void contained within. Findings from this study serve to reinforce the focus of this particular doctoral program in that our graduates are continuing to use the research skills that they were taught during the program. However, those findings have also uncovered concerns and gaps that would be advisable for the program to address. Chief among them would be strategies for helping graduates better understand how to disseminate their work but, perhaps more importantly, would be mechanisms for empowering them to help others with whom they work to see the value inherent in conducting action research on contextualized problems of practice. These strategies would be integral in helping to garner respect and support from supervisors and colleagues with whom graduates work. More broadly applied, these would arguably be skills and strategies that would be important in many practitioner-focused degree programs where applied research is a central focus. This might include any—and all—practitioner degree programs at the graduate level, and not just those limited to doctoral studies.

In educational settings, we tend to focus almost exclusively on student learning. This is, of course, of vital importance. However, we would be remiss if we chose not to focus warranted attention on continued *adult* learning. Action research into one's own professional practice can lead to individualized and customized professional development—focusing improvements on what we ourselves deem to be most crucial to the advancement of our collective and individualized practice.

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Appendix

Survey of Online EdD–L&I Postgraduate Action Research Engagement

	*** Research study being conducted by Dr. Craig A. Mertler ***
	The purpose of this study is to follow-up with graduates of the ASU/MLFTC Online EdD Program in Leadership & Innovation. Specifically, I want to learn about your continuing practices regarding the design and implementation of action research in your workplace context as a mechanism for addressing problems of practice.
	This survey should take no longer than roughly 15-20 minutes to complete. I greatly appreciate your time spent completing the survey and providing your feedback.
*	Required
1	F3+
1.	Email *
C	Demographic Information
2.	In what calendar year did you graduate from the EdD Program in Leadership & Innovation? *
-	Mark only one oval.
	·
	2020
	2021
0	
3.	Generally speaking, which of the following best describes your current workplace context?*
	Mark only one oval.
	Higher education setting
	PK-12 setting
	Nonprofit educational organization For-profit educational organization
	Nonprofit non-educational organization
	For-profit non-educational organization
	Other:
4.	Which of the following best describes your current position in that workplace? *
	Mark only one oval.
	Faculty/teacher
	Middle-level manager or administrator
	Upper-level manager or administrator Other:
	Outer.
5.	To which gender identity do you most identify? *
	Mark only one oval.
	Female
	Male
	Transgender female
	Transgender male
	Gender variant/non-conforming
	Not listed

Persistence in Postgraduate Practitioner Research

	Please indicate the degree to which you agree with each of the statements below.*
	Mark only one oval per row.
	Action research is a viable means to address and solve problems of practice.
,	Action Research Practices DURING the EdD Program
7.	
7.	
7.	Mark only one oval per row.
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7.	
7.	Mark only one oval per row. aring results of action research Reflecting on the action research process

	Please indicate which of the following you did in order to disseminate findings from your action research dissertation. *
	Mark only one oval per row.
	Wrote/published a report
٨٥	tion Research Practices FOLLOWING the EdD Program
Α.	donnésseach riactices i Octownio the Edd riogram
9.	
	Mark only one oval.
	None
	1 2
	3
	4
	5 6 or more
	6 to fillible
10.	If you answered "None" to the previous question, please briefly explain why you haven't conducted any action research studies.

Persistence in Postgraduate Practitioner Research

- ;	Specifying the problem of practice			
-	Specifying the problem of practice			
12.				
IV	lark only one oval per row.			
Oper	n-Ended Questions			
13.	se describe any aspects of your work or o	intext that PREVENT or DISCOURAGE you	ur use of contextualized action research.	

	Please describe any aspects of your work or context that help to PROMOTE or ENCOURAGE your use of contextualized action research.
15.	With respect to your continued use of action research to solve or address problems of practice that you face, are there aspects of the action research process that you find more challenging than others? If so, please describe them below.
16.	If there anything else that you would like to share with me regarding your continued professional use of action research, please feel free to share it below.
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