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# PRACTICING WHAT WE TEACH: USING ACTION RESEARCH TO LEARN ABOUT TEACHING ACTION RESEARCH

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**ABSTRACT**

*In this article, action research is explored as a process for instructor reflection, professional learning and collaboration. The context for the professional learning was the teaching of graduate level education courses in which action research, in conjunction with a cohort-based, collaboratory approach to learning, was used to facilitate students' design and enactment of site-based action research. Action research was used as a research methodology by course instructors who reflected on the design of the course and their pedagogical practices in order to engage in continuous quality improvement. The collaboration took place over a two-year period in which the instructors taught multiple online sections of the course. Using action research to collectively deepen understanding about teaching action research proved to be a valuable reflective experience for the instructors and continues to inform ongoing instructional design processes and the development of future research agendas related to instructor collaboration and action research.*

## PURPOSE AND CONTEXT OF THE RESEARCH

This paper explores the professional learning of instructors around the teaching of action research. Boyer (1990) first proposed the scholarship of teaching as one of four interrelated forms of scholarship in tertiary classrooms. This exploration of the scholarship of teaching is the result of an ongoing collaboration among instructors (the first three authors) who individually taught different sections of the same action research course and

an associate dean who oversaw the design, development and delivery of the courses and provided academic leadership of graduate programs (the fourth author). The educational research course, Collaboratory of Practice, is offered online to graduate students in different specializations in a course-based Masters of Education (MEd) program. The purpose of this paper is to describe how action research was used by the instructors to explore the professional learning related to teaching action research in the Collaboratory of Practice course. The outcomes of this study also have implications for instructors and practitioners who aim to advance the field of site-based action research.

Action research dates back to the 1930s and is a form of scholarly research in education that is growing in popularity and being explored as a discipline in a variety of ways (Beaulieu, 2013; Hendricks, 2013; Ponte, 2010; Stringer, 2010). Educational action research is often associated with classroom inquiry that guides practice through activities, interventions and reflection that teachers engage in as part of their day-to-day work and can be undertaken by individual teacher-researchers. For example, Fritz (2014) shares her experience as an active participant and reflective practitioner in a semester-long action research project focusing on exploration-based physics. Collaborative inquiry is a version of action research where teams of educators, including academic researchers, share responsibility and explore problems of practice for continuous school improvement (Adams & Townsend, 2014). These collaborations involve co-construction of knowledge about teaching in specific situations and have been adapted by higher education instructors to inquire into their own practice using a team or Critical Friends Group approach (Bernacchio, Ross, Washburn, Whitney & Wood, 2007). Action research is also used for in-depth field-based studies using qualitative and quantitative research methods with a focus on social and educational findings that are shared broadly (Kemmis, 2009; Mertler, 2014; Hendricks, 2013; Parsons, Hewson, Adrian & Day, 2013; Rust & Meyers, 2006). All of these types of studies fall under the umbrella of action research because of their focus on studying one's practice.

Action research studies have developed flexible and adaptable approaches to address a variety of educational problems. Embracing this flexibility, an action research approach using common elements from various models was adopted for this study: including an iterative process of defining a problem or focus for study, reflecting on practice, collaborating to collect, analyze and interpret data, and developing an action-oriented plan with results continually feeding back into the evolving action research cycle (Creswell, 2015; Hendricks, 2013; Mertler, 2014; Mills, 2014; Parsons et al., 2013). Throughout the action research process, the authors engaged in a dialectic process of reflection to improve the quality of their teaching in an online graduate level course in which students carry out action research to study a problem of practice in their own professional contexts.

**Collaboratory of Practice Course**

The online Collaboratory of Practice course draws from the conceptualization of collaboratories as a fusion of two important developments in contemporary research: communities of learners and collaborative laboratories of practice. The term collaboratory is a combination of the parent terms collaboration and laboratory (Lunsford & Bruce, 2001;

Wulf, 1993). The concept of collaboratories emerged in the 1980s and has been evolving since (Banks, 1993). Collaborative laboratories of practice (collaboratories) in this MEd program are designed as advanced, scaffolded and socially-connected learning experiences that are situated in complex, messy and real-world problems of practice that serve as sources of active inquiry and professional learning for the MEd students and for instructors.

The design of the Collaboratory of Practice intentionally builds upon a signature practice in the MEd Graduate program: the MEd Cohort. The MEd cohort is an intact group of students who take all of their courses in the program together. Master of Education students start and complete their degree program at the same time, engage in sustained academic and professional dialogue, and engage in shared learning experiences as a group. Students in each cohort are supported by instructors and administrators in becoming a community of learners as they progress through the MEd program. In a community of learners, MEd students learn by working together and by becoming a part of the larger community of learners in their cohort.

The facilitation of student collaboration involves the employment of strategies to promote students' working together to move learning forward (Osman, Duffy, Chang & Lee, 2011). Instructors promote collaboration when they model it among themselves and provide the necessary course content for students to do so as well (Coleman & Bandyopadhyay, 2011). Researchers recognize that the asynchronous discussions in many online learning courses do not necessarily promote student collaboration (Green, Edwards, Wolodko, Stewart, Brooks & Littledyke, 2010; Reese, 2015). To facilitate online collaborative inquiry, Hawthornthwaite (2006) recommends that instructors provide avenues for rapid feedback and allow students to communicate in a balance of public and private (recorded and unrecorded) spaces. Instructors in the MEd Collaboratory of Practice course provided those avenues through the use of the online learning collaboratory.

Dorneich (2002) defines an online learning collaboratory as "a collaborative virtual environment where students, teachers, and experts in the field or domain work together in a variety of ways to support learning" (p. 201). In the MEd Collaboratory of Practice, students work collaboratively to identify problems of practice and to construct new knowledge and solutions based on disciplined inquiry. The goal for learning is not for students to take in information as it is disseminated, rather the students build on knowledge they have gained in previous courses and experiences as they carry out their action research and inquiry projects (Anderson, 2003a; Anderson, 2003b; Bransford, Brown & Cocking, 1999; Garrison & Anderson, 2003).

Researchers suggest there are opportunities to enrich learning in distributed distance learning environments through learning collaboratories (Dorneich, 2002; Lunsford & Bruce, 2001; Rebmann, 2012). Using a collaborative laboratory approach, online courses can be designed to provide opportunities for individuals or groups to investigate real world problems and to design or recommend pragmatic solutions suitable to their contexts. The online Collaboratory of Practice course involves structured experiences for studying

authentic, real-world practice and professional learning experiences that incorporate signature pedagogies, such as inquiry-based and problem-based learning.

A program goal for the MEd is that students conceptualize and conduct disciplined inquiry and field-focused research. The required Collaboratory of Practice course was designed to provide opportunities for masters students to view problems within context and to actively interact with each other in the application of knowledge in authentic settings by investigating and learning from inquiry in the field and examining identified problems of practice using action research. The Collaboratory of Practice was designed to provide opportunities for students to work through the literature and methodology of the particular problem of practice that is the focus of their action research. This practice lends itself well to action research that supports educators' aim to improve education by studying and addressing problems or issues in a school or educational setting (Parsons et al., 2013). The students in the Collaboratory of Practice graduate course identify a problem of practice or issue from their own educational setting as the focus for inquiry. Parsons et al. (2013) describe research undertaken by teachers in their own schools as site-based action research. Similarly, one of the Collaboratory of Practice instructors used "uncovering the unknown and exploring the unexpected" as a generative phrase to provide graduate students with an essence statement describing the intent of the Collaboratory of Practice process. One goal of the Collaboratory is to promote critical inquiry that addresses important issues related to teaching, learning, and leading in order that collaboration among colleagues can be enhanced.

The role of the instructor throughout the academic term is to facilitate the planning, design and conduct of students' ongoing action research projects and to organize and facilitate research checkpoints for each stage of the research. The research checkpoints came in the form of synchronous web-based meetings and asynchronous discussion forums for the online courses. In the online discussion forums, students were organized into "studio groups", which are an adaptation of Grego and Thompson's (2008) learning approach for supporting a writing and sharing space for collaborative knowledge building and idea improvement within a course. In the studio groups, teams of students (3-5) enrolled in the same cohort and the instructor regularly interacted and dialogued about progress, shared work, offered feedback and provided suggestions for improvement. The studio groups worked well as students were all undertaking a similar pursuit and accomplished work both individually and in collaboration. Instructors utilized a variety of functions within the learning management system (i.e. discussion forums and dropbox) and other online tools (i.e. shared documents and web conferencing) to provide students with ongoing, timely and constructive formative feedback to further their learning and growth in designing and implementing an independent inquiry and learning from inquiry in the field. Students benefited from the active role of the instructor and at the same time the instructors learned more about action research by facilitating the action research projects of the students. Wilson and VanBerschot (2014) described how they adopted a practice-centered approach for designing and co-teaching a graduate level action research course. The instructors in their study focused on designing the course environment and then modifying critical course elements to improve students' learning experiences based on the local context.

Similarly, the authors of this article aimed to achieve adaptive and coherent learning designs through collaboration, reflection and responsive pedagogy.

**Conceptual Framework**

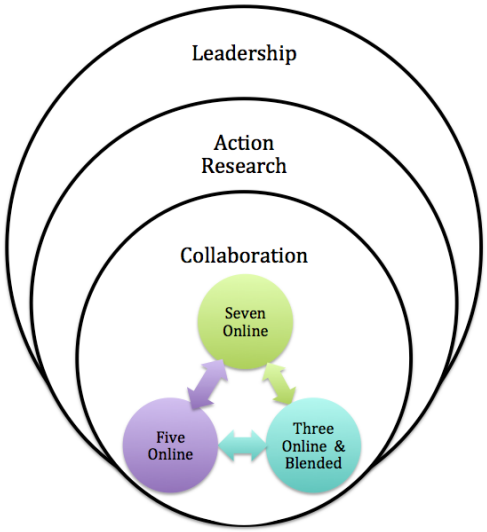
Six common elements across various models of action research informed the delivery of the Collaboratory of Practice course and also provide a conceptual framework for the instructor collaboration (Creswell, 2015; Hendricks, 2013; Mertler, 2014; Mills, 2014; Parsons et al., 2013). These six common elements of action research align with the specific work within the instructor collaboration and scholarship of teaching as shown in Table 1.

***Table 1: Common Elements of Action Research Informing Instructor Collaboration and Scholarship of Teaching***

| Elements of Action Research | Instructor Collaboration |
|---|---|
| Focus | Instructors strived to improve their own understanding of action research and their teaching of the online Collaboratory of Practice course. |
| Iterative Process | Instructors used their learning and reflections to inform subsequent iterations of the course, adapting the pedagogy to meet the specific needs of learners as well as to improve instruction based on an assessment of earlier instructional challenges. |
| Reflection | Each instructor examined her own practice and continually reflected on her own teaching. |
| Collaboration | Instructors shared reflections and consulted with one another and with academic leaders on a regular basis. As concerns arose they provided each other with constructive feedback. |
| Action | Instructors co-constructed a plan of action for future course iterations and future collaborations, which was supported by a senior administrator. |

The practice-centered approach and instructor collaboration was an iterative process of reflection-action (Parsons et al., 2013) and an approach to shared inquiry that was influenced by institutional leadership. As shown in Figure 1, the course instructors worked in professional collaboration as a group and in consultation with the associate dean of graduate programs, who oversaw the courses and provided academic leadership for programs. As noted by Boyer (1990), "the work of the professor becomes consequential only as it is understood by others" (p. 23). This process of instructor collaboration was considered a professional learning community, defined as "an ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve" (DuFour, DuFour, Eaker & Many, 2010, p. 11). The professional learning of each instructor informed her teaching of the Collaboratory of Practice course and each of the instructor's experiences in teaching multiple sections also informed instructor collaboration, action research and leadership. As such, this collaboration is an example of scholarship of teaching in tertiary classrooms (Boyer, 1990).

***Figure 1: Dynamic Process of Instructor Collaboration in a Professional Learning Community***




## RESEARCH METHODOLOGY

The participants in this action research study were the three instructors of the Collaboratory of Practice courses, Barb, Roswita and Sarah. After 18 months of informal collaboration, we formalized our professional learning by coming together for six months to study our practice using action research. The process of action research is commonly described as steps even though the process is iterative with a series of recurring cycles (Creswell, 2015; Mertler, 2014; Parsons et al., 2013). Using Mertler's (2014) four steps in

action research, we describe the way our informal and formal collaboration embodied (1) planning, (2) acting, (3) developing and (3) reflecting.

In the planning stage of the action research study, we identified an area of focus: improving pedagogy in subsequent iterations of the Collaboratory of Practice course by identifying the challenges and successes we had previously discussed in our informal collaboration and the remaining challenges we wanted to work on. In Acting, each instructor gathered evidence of our informal collaboration: reflective journal notes, past emails and iterations of course outlines. This evidence was shared at weekly meetings over the course of one semester during which we refined and continued our professional insights and observations. In the developing stage, the team of instructors communicated electronically and met in-person to exchange ideas about practice, establishing a common online folder for the collection and refinement of collaboration. We also included Michele, the associate dean and fourth author, in electronic communication about the formal research. Examples of data include emails in which one of the instructors would send a question to the group and the other instructors would respond by providing suggestions and strategies or exchanges in which the team sent each other information sources or samples of student work (with student permission) that could be used and shared across the different course sections; the reflecting stage occurred individually through personal written notes and then collectively through verbal discussions face-to-face or using the shared online documents. Throughout the action research, the four stages occurred as an ongoing, cyclical and collaborative process.

The question guiding this action research is: How has the experience of teaching and reflecting on the Collaboratory of Practice course informed and been informed by instructor collaboration? The instructors draw upon their ongoing collaborative communication for ongoing professional collaboration and learning over a two-year period (2012-2014) as the data for this study. Collectively, the instructors have taught multiple sections (n=15) of the MEd Collaboratory of Practice course in both blended and online formats, in both 13-week (Fall/Winter) and 6-week (Spring/Summer) versions across numerous specializations such as educational technology, educational leadership, languages and diversity and interdisciplinary studies. This article focuses specifically on the online formats of the course. Michele provided the overall MEd program design and history, as well as the specialist and research course design and academic leadership perspectives.

Perceptual data used in this action research focused the lens on each instructor's own pedagogical practices in online enactments of the Collaboratory of Practice course. The data were reduced and organized thematically using Mertler's (2014) constant comparative method of data collection and analysis through an iterative process (p. 167). In other words, themes were drawn from the data and examined for commonalities and a diversity of perspectives and reviewed again periodically by each of the instructors during the cyclical stages of action research. The strength of this iterative approach to data analysis was the triangulation of data over time, using multiple sources and perspectives of three instructors while repeating the same course in an online format.

## RESULTS

Three themes emerged as pedagogical challenges and opportunities for improvement in the Collaboratory of Practice course: (1) student understanding of ethics in action research, (2) student understanding of academic writing, and (3) instructor facilitation of peer feedback. Professional collaboration in these three areas resulted in improvements in pedagogical practices and ongoing exploration of curriculum adaptation. Each of these themes will be discussed in detail in the sections that follow.

### Understanding Ethics in Action Research

A program goal for the MEd program was that students evaluated and applied research to complex learning problems and problems of practice. The students in the MEd program engaged in their own action research study while attending to ethical requirements in action research. Students in the MEd program included practicing teachers and school leaders who were focused on improving practice; however, the requirement to engage in action research necessitated a deeper understanding of themselves as practitioner-researchers.

During early iterations of the Collaboratory of Practice course, the students were invited to conduct action research by selecting one of three options for inquiry: 1) preparing a formal ethics application in order to gather data from participants; 2) using a course-based ethics application; or 3) preparing a proposal for independent inquiry and self-reflection that did not require an ethics application. In the first option, students could apply for individual ethics approval from the University and decide on methods to collect data from participants in the study. In the second option, students could use a course-based ethics application lead by the instructor that limited data collection to interviews or focus groups with adult participants known to the researcher. The course-based ethics application was submitted by the instructor or academic coordinator, and approved by the institutional research ethics board, prior to the commencement of the course. In the third option students did not involve any participants in the study and were not required to apply for ethical clearance.

Even though institutional ethical application processes had been streamlined, applying for individual ethics approval (option 1) proved to be a time-consuming option for students and turned out to be difficult to accomplish during a 13-week course term. For example, some students experienced challenges in receiving timely feedback and approval from participating school jurisdictions, which added weeks to their research project. Many of the students in the MEd program designed research projects involving innovative topics in their discipline that created a challenge when seeking participant buy-in. For example, in one case a student was unable to secure approval from a school jurisdiction for a research project involving game-based learning as this did not clearly align with the jurisdiction goals or vision for learning. One of the challenges for students working at a distance was that their school jurisdictions were not in close proximity to the University or may not have had working relationships with the University or with instructors. Given the temporal challenges of securing ethical approval from the University and from a school jurisdiction

within the 13-week course timeframe, subsequent course iterations either did not explicitly include the individual ethics application (option 1) as a standard option for students or required students to initiate the application process earlier in their MEd program. Preparing a course-based ethics application (option 2) or proposing an independent inquiry (option 3), proved to be feasible options that enabled students to complete the research in the course time frame.

As novice researchers, the MEd students are bound to the same ethical principles, guidelines and practices as any educational researcher. Within the ethics agreement for course-based research (option 2), students were limited in the sources of data they could collect for their study (e.g., interviews or focus groups with adults known to the researcher). However, in their eagerness to conduct research, students would often inquire about using other data sources to which they had privileged access in their role as teachers or school leaders. The instructors discussed anonymized descriptions of these situations during the professional collaboration to either determine appropriate responses or to share collective learning of resolved situations. When necessary, the instructors also consulted with the academic coordinator and associate dean to find solutions and seek resolution of ethics questions and student situations. The resulting knowledge influenced the teaching of future student cohorts. Awareness of the potential for confusion, based on issues that arose, resulted in clearer course outlines and guidelines for subsequent course iterations. As well, the instructors placed greater emphasis on explaining the ethical policies for action research in subsequent courses.

**Understanding Academic Writing**

Writing a sound literature review for a proposed research project is a learned academic competency. The literature review is related to a MEd program goal that students review and critically analyze the literature to enable them to make practice and policy decisions. Ridley (2012) describes a systematic literature review as "in itself a research study, addressing research questions and using the literature as data to be coded, analysed and synthesized to reach overall conclusions" (p. 190). The preliminary literature review was embedded into the first of two learning tasks so that instructors could make recommendations and suggestions for further study prior to the writing of the final report. Whether students chose to conduct an action research study collecting data from human participants or an independent inquiry involving self-study of their own professional practice, scanning and critically reviewing relevant literature was an important step in developing their proposal and argument for the study in the first learning task. In some cases, preparing a literature review, treating the literature as a data source, and knowing how to cite that literature properly emerged as a challenge for students. In rare cases, plagiarism of the literature, classmates or one's own previous coursework arose in the writing of the literature review, and decisions were made in collaboration with the associate dean about an educational intervention or a disciplinary response. Each instructor responded to the challenge of supporting students in writing a literature review with strategies, such as sharing exemplars provided by former students, engaging students in ongoing feedback loops, providing just-in-time guidance, and intentionally discussing attribution of sources.

***Student exemplars to support writing***. All three of the instructors supplied exemplar student work in the online Learning Management System and used these sample pieces to discuss and help clarify learning intentions with students. Permission to use exemplars from previous course iterations was sought and received from past students of the course. For example, one instructor shared sections from some of the exemplars during a synchronous session with students to highlight areas of strength and point to ways of analyzing and synthesizing literature data sources. During the online session, students met in online breakout rooms as small groups to discuss the exemplars in comparison to the assessment rubrics. During this exercise, students also generated ideas to improve the criteria in the assessment rubrics. Sharing student exemplars with students proved to be a valuable strategy to clarify learning intentions, improve the assessment rubric and increase the overall quality of work submitted by students. Furthermore, within the professional collaboration, the student exemplars were sometimes shared and discussed by the instructors who sought guidance for their current students interested in particular topics or approaches. For example, the instructors shared examples of collaborative action research papers with each other to determine how to best support students electing to work with partners for the research. Sharing student exemplars with students and among instructors proved an effective strategy to improve quality of assignments and to support professional dialogue and learning.

***Ongoing feedback loops to support writing.*** All three of the instructors provided instructor feedback on drafts of student writing during the course. Feedback loops included written feedback to students in the form of comments and "track changes" on students' draft iterations of work. Some students preferred to share draft work and receive feedback using online documents, while others preferred to arrange synchronous virtual meetings to discuss their work. The instructors also coached individual students during phone or web conferencing consultations as needed.

Each of the instructors incorporated diverse strategies in their own courses to support students. For example, Sarah addressed concerns regarding both ethics and topic choice for the literature review by conducting individual phone and web conferencing consultations with students early in the course. She shared her perceptions regarding the success of this personalized approach with the instructor collaboration team and subsequently Roswita introduced individual web conferencing sessions. She too, concluded these consultations were instrumental in averting missteps with regards to ethics and topic focus. Barb organized asynchronous discussion threads for students to post early ideas about research topics and literature reviews and receive early feedback from the course instructor. In collaboration, the instructors discussed and compared the diverse strategies they used to provide ongoing feedback loops which resulted in deeper learning and a broader set of strategies for each of the instructors.

***Just-in-time supports for writing.*** Reviewing literature in-depth for purposes of the final report can be challenging. During a synchronous Adobe Connect session, Barb provided students with tips for managing the literature review and how to treat the literature as a data source. She supplemented this with a video playlist of additional sources to support students in collecting, analyzing and synthesizing literature sources. Developing videos for

students allowed the instructor to develop clear and succinct presentations that students could access at their convenience and can be re-purposed for other online courses. Roswita provided students with a checklist of common challenges in academic writing and reviewed it during one synchronous learning session. One of the instructors invited a former student to attend one of the synchronous sessions and provide insights and advice for writing and future publishing from a student perspective. Professional collaboration around supporting the writing of literature reviews resulted in a repertoire of just-in-time strategies for assisting students. The online strategies were shared amongst the instructors and then incorporated in subsequent iterations of the course.

***Attribution of sources in writing.*** In instructing students about the ethics of academic writing, the instructors discussed how to synthesize the literature in a way that properly credited the authors. The instructors provided examples of synthesizing ideas from readings in paragraph format, comparing ideas across multiple publications, displaying ideas from different authors in tables, and using visuals such as adapted figures. They also collaborated with the associate dean on how to advise students on citing work that students had completed during other courses in their graduate program. Over the course of the professional collaboration, the instructors developed and shared a number of ways in which they facilitated student understanding of substantiation of claims.

Despite the emphasis on ethics and proper attribution and citation, two of the instructors experienced issues related to plagiarism and all three found students struggled with the use of American Psychological Association (APA) style for referencing and citations. Consequently, each course iteration included more information about avoiding plagiarism, including self-plagiarism, as well as standards for proper APA citation and APA referencing for different types of sources, the chosen referencing style of the program. The inclusion of this information, coupled by the resources on how to synthesise the literature, served to strengthen instructor facilitation of students' academic writing, in particular in the literature review.

**Facilitating Peer Feedback**

Online studio groups can improve students' writing competency, communications and perceptions about the writing process (Kovach, Miley & Ramos, 2012). As such, the learning experience in the Collaboratory of Practice course was structured so that students provided feedback to peers throughout the research and writing process on a regular basis using a studio group approach; feedback was provided about draft work, and students were expected to incorporate suggestions for improvement, review additional resources suggested by peers or defend decisions for declining to use the feedback. The instructors' role was to facilitate studio groups, gauge levels of interaction and provide intervention as needed. In the studio groups, students reviewed drafts of their peers' work, including the proposal, outlines, literature reviews and reports, before they were submitted in their final form to the instructor. The students made their learning visible and shared their work in a collaborative and scholarly community of inquiry (Garrison, Anderson & Archer, 2000). In some cases, the instructors provided specific targets for completing the inquiry and dates for reviewing peer work. In other cases, the members of the studio groups determined their own schedules for peer review.

Instructors explored a variety of ways to support and encourage meaningful peer feedback. Some instructors allowed studio groups to self-select; in other words, to form their own groups. For example, in some instances Barb and Sarah asked students to send them a message with studio group requests. As noted earlier, students proceed through their MEd program as a cohort, and by the time they reach the Collaboratory of Practice course, they tend to know one another quite well and have developed trusting learning relationships. By allowing them to self-select, students were offered the opportunity to provide sincere peer feedback in an online group environment.

At other times, usually when the instructors knew the students from past courses, the instructors purposefully created groups with particular configurations of students that could support each other based on topic, location or complementary writing strengths. For example, in a cohort of leadership students, Roswita found that common themes such as relational trust in institutions or supporting pedagogical innovations emerged and subsequently grouped students by shared research interests. Similarly, Barb grouped students according to common themes selected by students in relation to educational technologies such as collaborative online technologies, gamification, technologies in early grades or technology coaching, to name a few. In an online cohort of English as Second Language teachers, Roswita grouped students by geographic location to facilitate weekly online meetings enabling group members to provide feedback to others in proximate time zones. In some cases, if the instructor knew students from previous course work, students could be grouped based on the complexities of support needed. For example, it was evident from previous work with one cohort of students that some needed additional supports in retrieving and reviewing literature and with academic writing. In this case, Barb grouped students based on learning needs and increased instructor-student communications and interactions in studio groups that required additional learning scaffolds.

Organizing studio groups is complex and the instructors noted it was a challenge to satisfy everyone with the group configurations. It was common for one or two students to send a complaint to the instructor about group contributions. In online classes, student complaints and tensions often relate to timeliness of contributions by peers or lack of participation and engagement in scholarly discourse or quality of peer feedback provided. Some students requested certain peers in their groups and not others based on contributions in other courses; sometimes students complained other students were copying their work or using their sources; some argued others were following their writing structure and copying the statements they used when providing feedback. Responding to group dynamics and tensions can be a challenge; however, clear instructions and expectations for peer review and for the quality of student work can help. The instructors found that using a common assessment rubric helped students work collaboratively and develop deep scholarly discourse and quality feedback within their studio groups. The rubric included key criteria promoting constructive uses of authoritative sources, democratizing knowledge, epistemic agency, idea diversity, improvable ideas, knowledge building discourse and scholarly writing. One of the benefits with the cohort model in the

MEd program was that students had multiple opportunities to improve work relationships with peers as a result of common expectations and a common assessment rubric for knowledge building with studio group members. Within the professional collaboration on the action research, the merits of variations among group creation strategies and strategies for supporting students in working through the tensions and complexities when working in groups were debated and discussed by the instructors as part of ongoing planning and reflection on practice.

The results of the research included the development of common strategies to support students with (1) ethics in academic writing and action research, (2) writing a literature review, and (3) facilitating peer review and feedback. The professional collaboration illustrated elements of action research and resulted in improved pedagogical practices for subsequent iterations of the Collaboratory of Practice course. This inquiry had a practical focus on teaching action research. The teacher-researcher's own practice and reflections about the successes and challenges in the context of the course informed this study. Working in collaboration, the instructors formed a professional learning community with each other and the associate dean. In this dynamic process there was continuous flow between reflection, data collection and action informing subsequent cycles of the action research. Each time the course was taught, a plan of action was used to inform changes and course improvements. Through their own action research efforts, the instructors developed greater understandings from which to facilitate students' understanding of action research and development as research active practitioners, as well as to contribute to ongoing collaborative design efforts in the graduate program.

It is our contention that the action research presented in this paper is significant for those interested in studying or supporting practitioners who employ an action research design as part of their scholarship of teaching and learning. Professional learning can be amplified by taking an action research stance within a collaborative community (Rust & Meyers, 2006). Instructors' reflective practice and scholarship can inform graduate programs and higher education institutions that are considering a collaboratory learning approach to supporting student research and inquiry in online graduate courses.

We also contend that these findings have implications for institutional leaders interested in fostering professional learning communities and supporting instructor collaborative-partnerships in pursuit of continual improvements to teaching and learning in higher education. Instructor collaboration can facilitate professional learning around the complexities of higher education context or mentorship among colleagues at different stages of their careers (Hutson & Downs, 2015; Mitton-Kükner & Akyüz, 2012). Taking an action research approach can facilitate this collaboration by providing a structure for formalizing sound work that may already be happening among colleagues and expanding it to encompass more instructors, especially those who are new to the course or program context.

## CONCLUSION

In this article, academic faculty have explored action research as a means to inform their continual course and pedagogical improvements in graduate courses and programs where action research is a prevalent methodology used by the students. Qualitative data from the reflective experiences of the instructors while teaching online courses over a two-year period provided rich data for this paper. Instructional design processes continually evolved over the two-year period and the instructors have a deeper understanding of the challenges that graduate students can encounter in conducting an action research study in the Collaboratory of Practice course. Themes emerged as teaching challenges across all sections taught: (1) student understanding of ethics in action research, (2) student understanding of academic writing, and (3) instructor facilitation of peer feedback.

From this collaboration, we have devised the following action plan for ourselves that also serves as a series of recommendations for higher education researchers.

1. The instructors in this study have created an ongoing action research agenda involving the gathering of additional data in a variety of forms for the purpose of informing and improving pedagogy in future offerings of the course. This research agenda will expand our collective understanding of how to use action research to study how best to teach action research. We encourage researchers to consider conducting action research on their own practice as it serves to inform the scholarship of teaching and learning in higher education.

2. The authors of this paper have created their own studio group and actively participate in larger institutional efforts to encourage collaboration for teaching and learning. While participation in professional learning takes time, professional engagement and learning in instructional teams models the collaboration we expect of students in courses and pays off in terms of collaborative learning about how to manage common challenges. These intentional collaborations can also result in additional research in the area of teaching action research. We recommend the creation of intentional collaborative opportunities and spaces for instructors to share practice, make learning visible, and exchange ideas around pedagogy and formative assessment strategies.

3. The authors will continue to study their professional collaboration as an inquiry into higher education pedagogy and action research. Further study in the field can provide insight into the professional learning and growth of instructors in collaborative teams who make use of self-reflective approaches. We recommend further study regarding professional collaboration among instructors in higher education.

The above recommendations inform course design, higher education pedagogy and action research for instructors. Just as action research enhances graduate students' teaching and research, action research can be an approach that enhances instructors' pedagogy and scholarship. Recommendations from the study serve to inform instructors and leaders in higher education institutions: instructors can use an action research agenda to engage in ongoing study of the design, implementation and evaluation of courses; and leaders can

support intentional collaborative opportunities for instructors and make provisions for sharing practice and making learning visible. Further study exploring professional collaboration among instructors in higher education would extend instructors' professional learning and growth opportunities.

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