The importance of action research in teacher education programs

Category: Refereed Professional Practice

Gregory S. C. Hine
The University of Notre Dame Australia
gregory.hine@nd.edu.au

Following entry into the workforce, there are limited opportunities for new graduate teachers to engage in critically reflective activities about their educative practice. In an increasingly complex and challenging profession, the need for teachers, administrators and school systems to become involved in professional development activities is ever present. Undertaking a unit in action research methodology provides those professionals working in the education system with a systematic, reflective approach to address areas of need within their respective domains. The University of Notre Dame Australia (Fremantle) offers a core unit in action research methodology as part of its eight (8) unit Master of Education degree.

This paper discusses the place of action research within a Master of Education degree, and within the teaching profession. The approaches adopted by two tertiary institutions (one in the United States, and one in Australia) to teach action research to educators are highlighted. More specifically, the professional practice employed by one academic to teach the action research unit within a Master's degree course is outlined. The author has taught the unit *ED6765: Action Research in Education* for the past four years consecutively, and believes the skills and knowledge developed as part of undertaking this unit are critically important within teacher education and the teaching profession. Some examples of past action research projects designed and implemented by students are also included.

Keywords: action research, teacher education, teacher professional development, school improvement.

Introduction to action research

Action research is a process of systematic inquiry that seeks to improve social issues affecting the lives of everyday people (Bogdan & Bilken, 1992; Lewin, 1938; 1946; Stringer, 2008). Historically, the term 'action research' has been long associated with the work of Kurt Lewin, who viewed this research methodology as cyclical, dynamic, and collaborative in nature. Through repeated cycles of planning, observing, and reflecting, individuals and groups engaged in action research can implement changes required for social improvement. To extend this notion, Kemmis and McTaggart (1988) view action research as a collaborative process carried out by those with a shared concern. Moreover, these authors suggest that action research is a

> form of collective reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out (Kemmis & McTaggart, p. 6).

The collaborative nature of action research is highlighted by other writers (Noffke, 1997; Reason & Bradbury, 2011). While Noffke suggests that this research methodology lends itself effectively to a broad range of beliefs and relationships—analogous to a family, Reason and Bradbury postulate that collaborative efforts help develop practical ideas to assist with the pursuit of worthwhile human purposes. Specifically, they contend that the participatory, democratic process of action research seeks to

> bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of individual persons and their communities (Reason & Bradbury, pp. 9-10).

Broadly speaking, action research enables researchers to develop a systematic, inquiring approach toward their own practices (Frabutt et al., 2008) oriented towards effecting positive change in this practice (Holter & Frabutt, 2012) or within a broader community (Mills, 2011).

Action research in education

Action research is an attractive option for teacher researchers, school administrative staff, and other stakeholders in the teaching and learning environment to consider (Mills, 2011). Specifically, action research in education can be defined as the process of studying a school situation to understand and improve the quality of the educative process (Hensen, 1996; Johnson, 2012; McTaggart, 1997). It provides practitioners with new knowledge and understanding about how to improve educational practices or resolve significant problems in classrooms and schools (Mills; Stringer, 2008). Action research uses a systematic process (Dinkelman, 1997; McNiff, Lomax, & Whitehead, 1996), is participatory in nature (Holter & Frabutt, 2012), and offers multiple, beneficial opportunities for those professionals working within the teaching profession (Johnson; McTaggart; Schmuck, 1997). These opportunities include facilitating the professional development of educators (Barone et al., 1996), increasing teacher empowerment (Book, 1996; Fueyo & Koorland, 1997; Hensen), and bridging the gap between research and practice (Johnson; Mills). These opportunities will be explored below.

Within education the main goal of action research is to determine ways to enhance the lives of children (Mills, 2011). At the same time, action research can enhance the lives of those professionals who work within educational systems. To illustrate, action research has been directly linked to the professional growth and development of teachers (Hensen, 1996; Osterman & Kottkamp, 1993; Tomlinson, 1995). According to Hensen, action research (a) helps teachers develop new knowledge directly related to their classrooms, (b) promotes reflective teaching and thinking, (c) expands teachers' pedagogical repertoire, (d) puts teachers in charge of their craft, (e) reinforces the link between practice and student achievement, (f) fosters an openness toward new ideas and learning new things, and (g) gives teachers ownership of effective practices. Moreover, action research workshops can be used to replace traditional, ineffective teacher inservice training (Barone et al., 1996) as a means for professional development activities (Johnson, 2012). To be effective, teacher inservice training needs to be

> extended over multiple sessions, contain active learning to allow teachers to manipulate the ideas and enhance their assimilation of the information, and align the concepts presented with the current curriculum, goals, or teaching concerns. (Johnson, p. 22).

Therefore, providing teachers with the necessary skills, knowledge, and focus to engage in meaningful inquiry about their professional practice will enhance this practice, and effect positive changes concerning the educative goals of the learning community.

As a corollary to the professional growth opportunities offered to educators, action research also facilitates teacher empowerment (Johnson, 2012). In particular, teachers are empowered when they are able to collect and use data in making informed decisions about their own schools and classrooms (Book, 1996; Fueyo & Koorland, 1997; Hensen, 1996). Within the classroom, empowered teachers can implement practices that best meet the needs of their students, and complement their particular teaching philosophy and instructional style (Johnson). In exercising their individual talents, experiences and creative ideas within the classroom, teachers are empowered to make changes related to teaching and learning. By doing so, student achievement is enhanced (Marks & Louis, 1997; Sweetland & Hoy, 2002), and schools become more effective learning communities (Detert, Louis, & Schroeder, 2001).

Johnson (2012) asserts that action research bridges the gap between research and practice. For instance, the theoretical components underpinning action research practice are used to help practitioners understand and observe what is happening in a classroom setting. At the same time, and with the interests of best practice in mind, these collected data "are used to understand or inform theories and research related to best practice" (Johnson, p. 20). In a similar vein to the enhancement of the professional disposition of teachers, action research encourages teachers to become continuous learners within their classrooms and schools (Mills, 2011). Because of the professional, reflective stance required by practitioners engaged in the action research sequence, teachers are further encouraged to "examine the dynamics of their classrooms, ponder the actions and interactions of students, validate and challenge existing practices, and take risks in the process" (Mills, p. 46). These specific actions are similar to those regularly exercised by teachers on a daily basis; using a systematic, strategic action research plan provides those daily actions with increased structure, focus, and methodological rigour.

The process of action research

Many guidelines and models of action research are available to teachers wishing to engage in this research methodology. For instance, action research has been described as a 'spiralling', cyclical process (Lewin, 1952; Kemmis, 1988), as a research 'cycle' (Calhoun, 1994; Wells, 1994), and as a helix (Stringer, 2004). In this paper, the author has included the action research helix (Stringer, p. 4); – commonly referred to as the "Look, Act, Think" model—as Figure 1 (see below). This model is used by the author to introduce the key processes of action research to students in *ED6765: Action Research in Education*. In the 'Look' stage, information is gathered by careful observation through looking, listening, and recording. During the 'Think' stage, researchers analyse the collected information to identify significant features and elements of the phenomenon being studied. Finally, the 'Act' stage is where the newly formulated information is used to devise solutions to the issue being investigated.

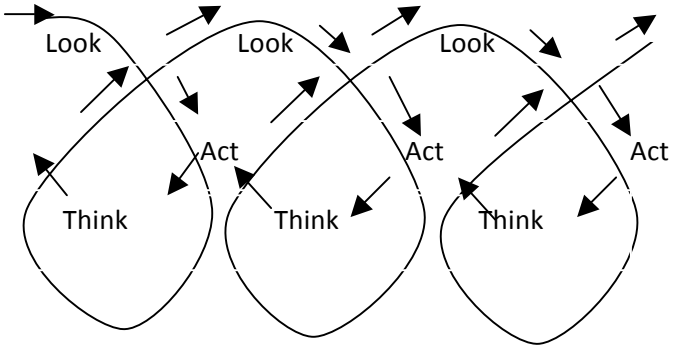

Figure 1: Action research helix (adapted from Stringer, 2004, p. 4)

To expand the key processes found in Figure 1, the author uses the Action Research Cycle, found in Figure 2 (see below). In Figure 2, the Action Research Cycle broadens the Action Research Helix (see Figure 1) into five key steps: Designing the Study, Collecting Data, Analysing Data, Communicating Outcomes, Taking Action. According to Stringer (2008), this cycle is a common process of action research inquiry. When designing the study, researchers carefully refine the issue to be investigated, plan systematic processes of inquiry, and check the ethics and validity of the work. The second stage of the research cycle is where the researcher collects information from a variety of sources about the phenomenon of interest. Next, this information is analysed to identify key features of the issue under investigation. During the communication stage, the outcomes of the study are made known to relevant audiences through the use of appropriate media or fora. Finally, and of critical importance to the action research cycle, the researcher takes action by using the outcomes of the study. These outcomes are used to work toward a resolution of the issue investigated.

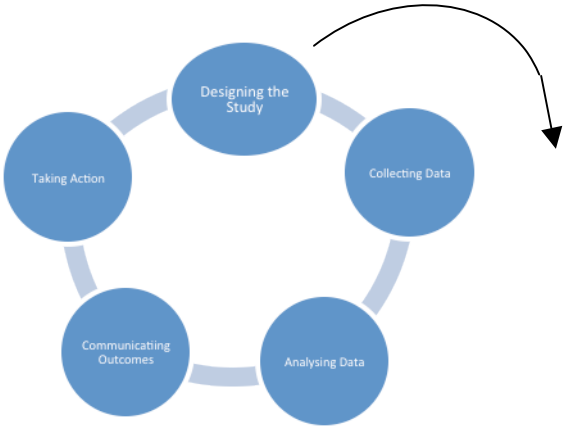

Figure 2: Action research cycle (adapted from Stringer, 2004, p. 5)

Action research within teacher education programs

Action research plays an important role in the preparation and professional development of teachers and pre-service teachers (Holter & Frabutt, 2012; Perrett, 2003). Specifically, action research initiatives are used within teacher education programs on national and international levels; namely, in Australia and in the United States. An initiative from each of these locations is listed and described briefly below.

Australia

In a south-west metropolitan region of Sydney, a research-based program was employed by ESL (English as a Second Language) teachers and consultants to develop a fusion between trainer-centred input and teacher-centred action research (Perrett, 2003). Three consultants associated with the Department of School Education in New South Wales and a lecturer in TESOL (teacher of English to speakers of other languages) organised the program. Demographically speaking, this region of Sydney is comprised of the highest percentage of ESL students in the state; it maintains seven Intensive English Centres for newly arrived high school students, and has numerous ESL teachers in the regular high schools. Twenty-five volunteer teachers from the area attended the program and six ESL consultants from other Sydney regions were invited as observers. The areas of input available to teachers included: learning strategies, thinking skills, questioning skills and the teaching of study skills.

During the four months of this action research project of the teacher educators, teachers experienced two cycles of action research. The first cycle required teachers to investigate students' learning strategies, and in the second cycle teachers implemented a plan to improve some aspect of their students' learning. These aspects included "summary writing, remedial reading, hotseating, introducing group work, vocabulary-learning techniques" (Perrett, 2003, p. 9). Following the observations of their implemented plans, teachers wrote reports on their work. At the conclusion of both action research cycles, the results suggested that there was scope for continuing to develop ways of 'marrying' the input and action research models of professional development for teachers. More specifically, and according to the teacher educators, the teachers appreciated being introduced to new ideas in their professional development experiences (Perrett, 2003). Consequently, those teachers stated they were most likely to integrate the insights gained from such experiences if encouraged to do so in a structured or semi-structured way. The organisers of the program concluded that considerable amounts of time need to be made available to teachers if similar projects are to be fully beneficial to learning communities.

Following the completion of two (2) action research cycles, organisers reflected on the significance of implementing this research-based program for teachers. Specifically, they administered a summative questionnaire to all teacher participants to identify benefits and shortcomings of the program itself. In these questionnaires, teachers responded directly and positively to most aspects, commonly stating: 'Made me aware of learning strategies,' 'Provided me with ideas for the future. It has made me think about the way my students learn,' and 'My understanding of action research has broadened.' Most negative responses centred on practical suggestions concerning logistical aspects of the program. For instance, suggestions included conducting the projects earlier in the school year, and introducing the model of action research earlier in the sessions. Perrett noted that in this program, "because the action research projects of the teachers became the action research of the teacher developers, three levels of learning took place (2003, p. 9). First, the school students developed their English and their understanding of how to learn English. Second, the teachers developed new ways of thinking and supporting student learning. Third, teacher educators engaged in a new model of teacher inservice training. After examining the outcomes of the program, Perrett concluded that "the results suggest that there is real scope for continuing to develop ways of marrying the input and action research models of inservice teacher development" (p. 9). For these researchers, teachers, and students, the implementation of action research methodology into a school community was considered to be a beneficial exercise.

The United States of America

At the University of Notre Dame, IN, the Mary Ann Remick Leadership Program is a graduate program undertaken by aspiring Catholic educational leaders (Holter & Frabutt, 2012). Completion of this program culminates in a Master of Arts degree in educational administration and leadership. Within the program, candidates must complete a four-course, 10-credit-hour action research sequence designed and implemented by the Program's faculty. The four-course sequence of learning experiences occurs over a three-year period in which "each degree candidate designs, executes, reflects upon, and disseminates an original, context-specific action research project" (Holter & Frabutt, p. 258). In the first course (Stage I), the action-researcher identifies an issue, problem, or need that will be the focus of their inquiry. This process provides an opportunity to identify a potential topic that is focused on change, is reasonable in scope, and is feasible to complete within one year. Additionally, the candidates are exposed to the basic components of educational research (research designs, methodologies, quantitative and qualitative data analysis) while continuing to focus on their own action research topic.

During Stage II candidates – who work as full-time teachers and administrators – implement their proposed action research project as they return to their schools. At the same time as they carry out the data collection process of their projects, these teachers and administrators are enrolled in an online course, *Action Research in Catholic Schools I*. This course requires candidates to "complete periodic research journal entries to update course faculty on progress and challenges, and each candidate receives individual consultation, feedback, and troubleshooting advice as needed" (Holter & Frabutt, 2012, p. 261). Two other features of Stage II include the completion of course readings based on key issues in action research, and a peer collaboration exercise. This exercise is done through groups – where each candidate is allocated to a five or six-member action research groups – and communication is conducted via email or telephone conference call. Groups communicate to update one another on progress, and exchange drafts of documentation used thus far in the action research process.

During the second semester of the academic year, program candidates commence Stage III of the four-course learning sequence. Candidates enrol in *Action Research in Catholic Schools II*, another online course in which they continue to work intensively on their individual action research project. The effort here is focused on "finalising data collection, defining the pattern of findings, and specifying the action researcher's interpretations and conclusions based on that information" (Holter & Frabutt, 2012, p. 262). Additionally, candidates plan for the next sequential steps of their project, namely: recommendations, suggested new interventions, or a subsequent round of the action research

cycle. One further round of peer review occurs at this stage, where each candidate exchanges a paper draft with a colleague. The colleague reads the paper in its entirety, and provides specific written commentary and feedback on each section. In Stage IV, candidates complete the final iteration of the action research cycle by enrolling in a capstone course Leadership in Catholic Schools. This course is designed to facilitate reflection on the process of action research as it has unfolded in the school community, and to encourage dissemination of the results with their cohort peers and members of their school community (Holter & Frabutt). In taking a reflective stance towards their action research sequence, candidates 'unpack' the challenges, successes, and insights their experiences have brought them. Additionally, they are challenged to outline how the approach, skills and methodology of action research ultimately shapes them as a school leader.

Following the submission of a final report, emerging school leaders have experienced a full cycle of action research. As such, program organisers feel that these leaders have acquired a specialised set of skills and have demonstrated competencies particular to action research. According to the program organisers, this instructional and experiential process is beneficial to emerging school leaders as it "enrols members from a particular community, empowers them with the tools necessary for systematic research, challenges them to apply those tools to their own community needs, and supports them in the evaluation of the projects and interventions they are assessing" (Holter & Frabutt, 2012, pp. 263-264). Moreover, these candidates engage in a problem-solving process directed at an issue of real concern to them and their school community, and as such, enhance their own effectiveness as school leaders. To illustrate, one program graduate wrote:

> No longer must I feel imprisoned by anecdotal evidence, which is far too often used to make important decisions regarding the fundamental aspects of the life of the school. Now if there is a problem, I have a systematic approach to examining existing research on a topic, collecting data, and analysing results that will allow me instead to be data informed (Holter & Frabutt, p. 264).

All feedback collected from program graduates indicated an appreciation for informed data usage as a mechanism for school leaders remaining intently focused on mission and continuous improvement.

Professional practice

At The University of Notre Dame Australia, the unit *ED6765: Action Research in Education* is offered to Master of Education students in Semester One each year. The unit commences in Summer Term (January), and concludes at the end of Semester One (June). At the beginning of the unit, students undertake an intensive mode of study for three (3) days. The purpose of this intensive period is to provide students with a background to the underlying purposes of research in general, to delineate the nature and purposes of action research, and to identify the essential elements of the action research process. Additionally, students are required to design their own action research project which is tailored to the specific needs of their educational context and circumstances. During the design stage, students are given 'first-hand' experience in the essential and preliminary action research processes of: clarifying and defining their selected problem, concern or challenge, and establishing an action research project focus and framework. Next, students are asked to complete a Research Proposal Application, which is comprised of several official documents. These documents include: the Research Proposal, two University Human Research Ethics application documents, and an Application to Conduct Research in Schools document. Once completed, all documents are submitted to be reviewed by the Research Committee within the School of Education; following this review, the research projects that will take place in Catholic schools are forwarded to the Catholic Education Office for further review (in addition to another set of proposal documents created by the CEOWA).

Once approval has been given for the research projects to commence, students are able to begin the data gathering stage. Following the January intensive study period, students return to campus for two 'Follow-Up' days. The purpose of these follow-up days is to provide students with further skills and knowledge in action research methodology, to allow students the opportunity to communicate their

findings and recommended improvements, and to engage in exercises for planning and negotiating further actions in research. Additionally, the follow-up days have been planned at intervals that coincide both with the students' respective 'research journeys', and the submission of assignments for the unit. In terms of instruction, the teaching component for the first follow-up day engages students in activities concerned with validity and trustworthiness in qualitative research, and ethnographic interviewing techniques. The second follow-up day focuses on analysing and interpreting interview data, with particular attention given to coding techniques and processes for generating meaning through inferences and hypotheses. Throughout the duration of the unit all students receive individualised support from the lecturer via email, telephone, or office appointment.

The four assignments for *ED6765: Action Research in Education* are designed to complement the students' respective research journeys. For instance, the first assignment comprises the completed research proposal and supplementary Human Research Ethics application documents. This assignment provides students with a solid understanding of the stages of planning and preparing to conduct qualitative research within schools, and the specialised knowledge required to complete the appropriate application documents. Assignment Two requires students to compose a 1,500 word paper that specifically reports on the progress of their particular research project to date. The progress report allows the students the opportunity to reflect on how—methodologically speaking— they have been able to arrive at the present point in their project. Although students are not penalised for a lack of 'quantitative' progress within their projects, a key indicator of progress is the written testimony that acknowledges how they have been able to carry out a plan with procedural clarity and sound methodological rigour. Assignment Three is a 2,000 word paper that asks students to examine the methodological aspects of their research project against key, criteria established by highly experienced action researchers. After comparison, students are invited to explicitly state how their efforts at designing and conducting qualitative research could be improved, and outline how they will adjust their project accordingly such that it corresponds with the recommendations of professional researchers. The final assignment—Assignment Four— is comprised of two chief tasks: the completion of a summative report, and the analysis of an original, recorded ethnographic interview. It is here that the researchers are able to describe how far they have progressed into their projects, what procedural changes had to be made from the original research plan—and to justify these changes with good reasons, and to demonstrate proficiency in exercising research skills.

The unit *ED6765: Action Research in Education* enrols professionals from diverse areas of the educational enterprise, including: Early Childhood, Primary, Middle School, Secondary School, Leadership and Administration, and Tertiary. Consequently, the action research projects undertaken in any given year are increasingly diverse, with topics ranging from pedagogical efficacy to school-wide improvements in student behaviour. As evidence of this diversity, and to illustrate the efforts of engaged school practitioners, a brief synopsis of three (3) action research projects is now offered. The first project concerned one school Principal's approach to reducing the ongoing, negative behavioural interactions among students at lunchtime. This Principal collected data from a sample of students across all year levels at her Primary School through the administration of a qualitative survey. Additionally, all teachers at the school were interviewed in focus groups of three participants each. After the first 'cycle' of action research was complete, the Principal reflected on the collected data and determined that she needed to further narrow the focus of the project. To amplify, she found that a majority of reported incidents on the playground involved Year 6 or Year 7 male students. For the next cycle of research collection, the Principal planned to interview all Year 6 and Year 7 students.

A second project involved an Early Childhood teacher investigating ways to reduce anti-social behaviours among children in her Kindergarten class. Prior to commencing data collection, the teacher had noted that anti-social behaviours comprised children hitting, pushing, biting, and spitting. This teacher interviewed all Early Childhood teachers at her school with regards to this phenomenon, and collected observational data on current incidences of anti-social behaviour (and how these incidences were resolved). After collating and analysing the data, the teacher prepared a condensed account of commonly observed anti-social behaviours, together with the most effective strategies used to resolve the behaviours themselves. After presenting these data to her Early Childhood colleagues

and the school Principal, the teacher began planning an information session for the upcoming Parent Night. The intention for this session was twofold; first, to ask the parents what anti-social behaviours they had witnessed outside of school, as well as effective resolution strategies, and second, to share the data collected thus far in the project. From this, the teacher wished to include the perspective of parents into developing (i) a school-wide policy for resolving anti-social behaviours in young children, and (ii) a unilateral approach between home and school in addressing this phenomenon.

For the third project, a Deputy Principal explored ways to improve the profile of the existing Professional Development program at his secondary school. At that time, this Deputy Principal had been tasked with leading a committee of school personnel responsible for the revitalisation of teacher inservice training. To begin the data collection phase of the project, all staff members were asked to complete a qualitative survey regarding Professional Development opportunities currently offered to staff at the school. Following the collation of these initial data, and based on responses proffered, the Deputy Principal purposively sampled staff for follow-up interviews. The results of the interviews were analysed and presented to the committee, who in turn, discussed the next logical steps in the action sequence. The 'act' step of this project was for the committee to (i) draft a Professional Development framework that took into account the suggestions, opinions, and needs of the project participants, and to (ii) present this framework to the school Principal for consideration.

Caveats and difficulties encountered

Over a four-year period, the author/lecturer has noted that students often encounter several, recurring difficulties with regards to the successful completion of the unit *ED6765: Action Research in Education*. These difficulties include: a lack of clarity of focus for the project, managing constraints of time, and holding a presumed foreknowledge of the solution. Each of these caveats will be discussed briefly, together with some suggestions that students have found to be useful in alleviating the particular difficulty.

From the commencement of the unit *ED6765: Action Research in Education*, students are required to focus on one area of concern in their classroom or school. Within this area of concern, students conduct qualitative research in an attempt to illuminate possible solutions to the prevailing problem. During the intensive period, students are taught to 'narrow down' the focus of their project by outlining the research participants and determining what will be asked of these participants. Statements outlining the justification for including these participants and stakeholders are scrutinised closely, together with the topic being investigated. This is done to ensure that the research projects are kept manageable, yet challenging and focused intently on the phenomenon of interest. Without the one-on-one discussion between lecturer and student prior to research proposal submission, there is a good possibility that several projects would be too broad to conduct within the specified time frame.

Because this unit requires students to conduct their own research project whilst fulfilling full-time duties within schools, time management can become an area of difficulty. When preparing the research proposal, students create a timeline detailing the key events within the unit (contact days, assignment due dates, proposal submission deadlines). Although this timeline is submitted as part of the research proposal (as an appendix), students retain an electronic copy of the timeline to assist with time management throughout the course. During repeated intervals within the unit, the lecturer remains in contact with the entire cohort of research students through group email; this contact assists students in meeting deadlines for assignments, preparing for the two additional contact days, and in maintaining focus on the research project.

The third caveat associated with teaching *ED6765: Action Research in Education* concerns a commonly-held predisposition by students when commencing the unit. More specifically—and upon arrival to campus with a recognised 'problem' ready to investigate—students appear at this stage more inclined to presuppose to know what the solution to this problem is. Of course, a key tenet of action research is that one must follow the 'observe-reflect-act' process (Stringer, 2004), and this highlighted on Days One and Two of the intensive period of study. Furthermore, this process requires

students to speak to (a) suspend any preconceived ideas of what the potential solution(s) to the problem might be, and (b) speak to all project participants before arriving at a decision on how to logically proceed with a plan towards improvement. During the intensive period of study, the lecturer uses several opportunities to carefully explicate that the action research sequence is one that requires patience in planning, researching, and analysing data before committing to a plan of action. These opportunities include the explicit instruction of key principles of action research, during a one-on-one discussion at the proposal planning and submission stage, and through the ongoing provision of feedback regarding the research projects.

Conclusion

There is clear evidence to suggest that action research is a valuable exercise for teachers to undertake. It offers teachers a systematic (Frabutt et al., 2008), collaborative (Kemmis & McTaggart, 1988), and participatory (Holter & Frabutt, 2012; Mills, 2011) process of inquiry that actively seeks to address areas of concern or redress. Additionally, action research provides teachers with the technical skills and specialised knowledge required to effect positive change within classrooms, schools, and communities (Johnson, 2012; Stringer, 2008). Ultimately, the solutions-based focus, emphasis on fostering practitioner empowerment, and pragmatic appeal of action research collectively render this research methodology a worthwhile professional development activity for teachers. There is unlimited scope for teachers wishing to develop 'customised' action research projects of their own, as topics for investigation are as multifarious as the daily vignettes evidenced in the teaching profession. To conclude, universities must include action research as a core unit in teacher preparation degree programs—either at the undergraduate or postgraduate level, as the action research sequence holds significant value to improving practice within classrooms, schools, and communities.

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