

Action Research: A Critical Review and Personal Reflection

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Critical Review

Qualitative research methodologies open opportunities for researchers to collect data and identify themes that otherwise may not be possible through solely quantitative methodologies. Action research, also commonly referred to as participatory research, is one such flexible methodology that focuses and involves change through research to promote development (Somekh, 2008). Action research produces both practical and theoretical outcomes, generating knowledge that directly and continuously impact changing practice for participants and therefore is commonly used to transfer research knowledge into practice in fields including education, social, health services and community development (Somekh, 2008). This research methodology is conducted in classrooms due to its effectiveness and its focus on allowing teachers to become researchers to solve their own problems and bring about change in their profession. Educators utilize action research as a “practical, yet systematic research method to investigate their own teaching and their students’ learning in and outside the classroom” (Nolen & Putten, 2007, p. 401).

During the 1940s, Kurt Lewin, a social and experimental psychologist, first used the term in his paper “Action Research and Minority Problems” (O’Brien, 1998). Considered the father of action research, Lewin used a set of spiraling steps to conduct his comparative research on social actions and used it as a methodology to study and resolve workplace conflict (Beaulieu, 2013). In the post-war era, Eric Trist contributed greatly to the field of action research and together with Lewin applied their research to emphasize “direct professional-client collaboration and affirmed the role of group relations as basis for problem-solving” (O’Brien, 1998, p. 6). In the past two decades, action research has begun to become a more common research practice, especially in the classroom as it permits practitioners to utilize academic research into their daily practice,

allowing them to control and evoke change (Nolen & Putten, 2007). Post-secondary institutions offer courses on action research and Julian Kitchen from Brock University and Diane Stevens from University of Toronto designed an action research project to teach preservice teachers about the methodology as described in their paper, “Action Research in Teacher Education: Two teacher-educators practice action research as they introduce action research to preservice teachers” in 2008. This participatory action research was chosen because it provided an educational process for researchers and participants to work collaboratively.

As a research methodology, action research allows researchers to question practice and investigate ways to improve practice by posing “how” and “should” questions (Adams & Goble, 2014). Through a cyclical cycle, a teacher, administrator or any interested practitioner may gather data on a particular school’s operation, teaching and student learning using a reflective practice to make change and contributions to improve instruction (Nolen & Putten, 2007). The researcher’s “how” and “should” questions are attempted to be answered in an ongoing scientific study by first studying the problem, implementing an intervention informed with a theoretical basis, collecting and analyzing the data, and finally refining the methodological tool through reflection to begin the cycle again (O’Brien, 1998). Action research is therefore based on a four step circular model: planning, action, observation and reflection.

Data collected from the practice should be naturally occurring and mindfully stored (Adams & Goble, 2014). The data collected may be qualitative in forms of surveys, interviews and observations with quantitative components. Conducted collaboratively and used in real situations to solve real problems in the field, the data collected in action research is analyzed

through the researcher's particular theoretical framework, which may include psychoanalysis, hermeneutics, critical theory or phenomenology. Due to its cyclical process, the identified problem is re-assessed in the researcher's reflection, leading to the beginning of another cycle until the problem is satisfactorily resolved.

Action research was first used in the field of education by Stephen Corey at Teachers College at Columbia University, believing that the change occurring in everyday practice due to action research is more valuable than generalization to a wide audience (Ferrance, 2000). Allowing participants to also be collaborators, teachers and researchers worked together in a partnership to collect data that comes from personal experience and their practice. Corey helped pave the path for action research to become a tool for teacher professional development, allowing an emphasis on the teacher to become a tool for change and practitioners who wish to improve their practice to have an impact. World-wide literature is shared in *The Journal of Teacher Action Research*, a peer-reviewed journal founded in 2013 including articles and lesson plans submitted by teachers and researchers to inform action in classroom practices.

By enabling participants to examine their educational practice systematically and carefully to solve problems identified, action research creates effective practitioners through a collaborative process (Ferrance, 2000). Teachers may work individually, carrying out the research in the teaching context and environment, dealing with real-world situations, once they have identified a single issue in their classroom. Some other common types of action research involve collaboration with teachers working in small groups, school-wide research focussing on a school concern or district-wide research. The benefits of action research aside from the knowledge

gained for the field of education involve teachers' growth and confidence through the research and reflection process. Through the research, teachers transform the knowledge gained into meaningful lessons and sharing their work in a collaborative network develop stronger relationships by examining instructional strategies, learning activities and classroom experience (Ferrance, 2000).

As action research's purpose is to utilize a collaborative relationship between the researcher and participant to solve a problem and generate new knowledge and as a qualitative research methodology, it does not deal with a hypothesis or theory building, but rather research themes where lessons can be obtained. Themes may include increasing parental involvement, school-based organization and decision-making structure, student achievement or engagement (Ferrance, 2000). The separation between policymakers and practitioners may be reduced through collaborative action research by allowing for more communication on a shared vision and resulting in more direct and ongoing impact in the field of education (Somekh, 2008). Solutions to practical problems may be reached because the topics investigated are always relevant to the researcher's personal context.

The process of research and action are integrated in action research methodology by bridging the gap between research and practice (Somekh, 1995). Through the four step cyclical cycle of plan, act, observe and reflect, each stage of the ongoing cycle informs the next through research *with* others, not research *on* others (Beaulieu, 2013). Action research began with a pragmatic philosophical framework based on John Dewey's work on social progress, taking on the "idea that research cannot construct significant meanings without engaging in practical action"

(Greenwood, 2015, p. 200) and has since 1980 moved towards a critical theory philosophical framework. By allowing practitioners to introduce issues to investigate and control the research process, they are empowered to promote social justice in education systems and organizations by allowing them access to knowledge and power to resist oppression (Somekh, 2008). The research topics and areas of interest are grounded in personal experience and inquiry for personal growth rather than predetermined knowledge and theories developed outside of the school setting. Practitioners are given the flexibility to introduce new or modified intervention strategies within the process of action research with the start of each cycle and to determine its effectiveness for the question posed.

Change and impact are immediate and more directly resulting from the research as the objective of action research is to improve the quality of human life and become better practitioners through knowledge acquisition and strategy development to address identified problems (Beaulieu, 2013). The repetitiveness of the structure of action research allows immediate change because through observations made with each repeated loop, changes are made due to the researcher's reflection and a new intervention is implemented with its results analyzed. With a high interest by the stakeholders involved in the research, the critical reflection made at each stage contributes further to the group's values and improvement on the issue (Somekh, 1995). Teaching is a reflective practice regardless of research being conducted. Therefore, action research utilizes the practitioner's reflective habits to evoke change and measure its effectiveness in the classroom or school setting.

Action research is also related to an interpretative paradigm, using hermeneutics to claim that practical action is essential to understanding and centres around the action to arrive at meaningful and consequential interpretation. The researcher is not separate from the process, but rather an integral part of the process who can provide rich and deep data from the research (Greenwood, 2015). Being an interpretive research, seeking a singular truth to be generalized is not the objective or purpose, but rather to expose a broad view of the conditions that exist and develop opportunities for different strategies to accommodate these views (Beaulieu, 2013). The cyclical structure of the research, where each stage informs the next, leaves the researcher with unlimited possibilities and an open-endedness due to the involvement of human interactions and relationships (Greenwood, 2015). Since human nature is unpredictable, action research allows researchers to constantly reflect and revise their research as they work towards improving their practice. Action research understands the dynamics of human interactions and utilizes complexity to emphasize the different possibilities of meaningful and emergent social change (Greenwood, 2015). The interventions implemented by the researcher allows for the complex relationship between the results and change to exist and the unpredictability of the results guide the researcher to adapt and reflect prior to the next stage in the research.

The legitimacy and use of qualitative research methods have increased over the years. While it has a similar process to quantitative methods, “qualitative methods rely on text and image data, have unique steps in data analysis, and draw on diverse designs” (Creswell, 2014, p. 183).

Validity and reliability is measured differently than in quantitative methods. Qualitative validity requires the researchers to employ procedures to check the accuracy of their findings and qualitative reliability ensures that the approach used by researchers and different projects remain

consistent (Creswell, 2014). Action research, along with other qualitative methodologies, do not lead to generalizing findings. Instead, it generates knowledge about the relationship between human behavior and sociocultural situations that include narrative accounts, rich descriptions, analysis and interpretations for others to compare with their own personal situations (Somekh, 2008). The research tends to be conducted in a single, unique situation where the findings can not be generalized like other traditional research as each research study is specific to the individuals involved (Beaulieu, 2013). However, the findings can be shared with interested colleagues to conduct their own action research or to relate and compare their personal experiences and to inform action.

Findings from action research is “fed back directly into practice with the aim of bringing about change” (Somekh, 1995, p. 341). Validity of the data collected in action research is not measured by its frequency and precision, but the evaluation of the impact of the circular cycle of planning, acting, observing and reflecting and comparisons made by other practitioners with their personal experience (Somekh, 1995). With a pragmatic orientation, action research has some limitations. With the researcher also taking on the role of a practitioner, who has different responsibilities, time for research may be limited. Somekh (1995) suggests that practitioners are given the opportunity to have an impact by conducting innovative research, but may lack specialized knowledge required to conduct proper research. With these limitations, data may only be collected based on specific opportunities and researchers may need to be strategic when preparing collaborative action for effective change.

While the researcher taking on the role of the practitioner may allow for rich data to be collected due to personal experiences and encounters, it also raises an ethical issue that the researcher is investigating his or her own practice (Somekh, 1995). Because action research is a reflective practice, researchers must be prepared to critically analyze and evaluate their own practice to make changes and improve. This analysis may be difficult for some researchers because it is a personal practice. Clear distinctions must be made at the beginning to identify data to be collected for the research and for the role of a practitioner to ensure ethical principles are met for all participants involved. Although the researcher takes on multiple roles and responsibilities, he or she must understand and be able to clearly communicate the purpose for all data collection, as a researcher or a practitioner, to ensure all the data is ethically obtained. The ability to provide personal experiences and insight within a research study is invaluable, but the researcher must be able to remove personal bias as he or she is constantly involved in the phenomenon being studied and during the analysis of the research (Nolen & Putten, 2007). It is important that researchers remain objective throughout the study to ensure its validity. For the reason that action research is a collaborative task, suggestions to work with post-secondary institutions with expert researchers to develop research studies together or to provide ethical training and a scholarly support network for teacher practitioners interested in research has been recommended by Nolen and Putten (2007).

Action research in the classroom often involves K-12 students who are minors and may not possess maturity or interdependence to make informed decisions when asked to participate by an authority figure (Nolen & Putten, 2007). A trusting relationship must be built to allow the participants to be truthful in their responses and to understand that their participation will remain

confidential and that no pressure or consequence will result in whichever decision is made by the participants (Nolen & Putten, 2007). Even though action research is a dynamic process that can change between cycles, the researcher must begin by presenting a clear and systematic process involving all potential risks to the participants so they can make an informed decision to consent or not. Participants may not choose to be involved in the study if they do not understand it or its purpose. Nolen and Putten (2007) question if participants can truly consent to a research study as proposed with the issue that action research is constantly and unknowingly changing based on emerging results. To fully disclose all the potential risks, researchers must take the time to produce consent forms that clearly identify these risks and explain the nature of the complex research process and therefore there may be a delay in time to begin the study (Nolen & Putten, 2007). Relying on the data collected naturally in the environment, the delay in action research may result in some experiences left undocumented that may contain significant information.

Education is a dynamic environment and field of study, constantly filled with emerging questions and problems due to the multiple individuals involved daily. Action research is one research methodology that can uncover new knowledge, solutions and strategies to answer these inquiries through interpreting qualitative data (Nolen & Putten, 2007). The recurring cyclical cycle of planning, acting, observing and reflecting allows researchers to adapt and fit different contexts as it is a fluid and flexible process. The unpredictable nature of the research process is parallel to the daily events of a regular classroom. O'Brian (1998) describes action research as "learning by doing" and this process provides teachers an opportunity to continue their professional development by developing new practices and sharing their generated knowledge with colleagues through journal publications such as *The Canadian Journal of Action Research*.

As teachers are reflective in nature, action research allows the every-day practitioner to adopt the role of a researcher to implement interventions based on an identified problem and to explore their own assumptions and shape their research, thus creating change by generating knowledge centrally important to themselves (Somekh, 2008). Generally a collaborative approach, action research creates partnerships between unlikely participants, bridging the gap between policymakers and practitioners as well as research and practice. Being immersed in the research process, the practitioner brings a unique perspective to the study, but must be aware to proceed in an objective and ethically manner, respecting participants and collecting data with proper informed consent. Action researchers tend to not be research experts, therefore they must be able to identify when to take on the role of a researcher and when to act as a practitioner. Through practitioner empowerment, action research introduces recurring interventions, informed by the results in the previous stage, in hopes of creating tangible change and improvement in the classroom and contributing to public knowledge to inform action in others in the emerging field of education.

Personal Reflection

Having participated in three collaborative action research projects from 2015 to 2018, my personal lived and learning experience has been very positive and surprising. I began my first project with a colleague, overwhelmed and little frightened of the task at hand. The support from her and the research team emphasizes the fact that action research is truly research *with* others, not research *on* others (Beaulieu, 2013). In our paper, *Creating Opportunities for the Growth of Student Success*, we were interested in learning “How and what supports can be provided by the

school to assist middle school students increase success at Aurora Academic Charter Middle School?” As the two of us explored various parent and student engagements to improve students’ success in our school, collected and analyzed data through surveys, we surprised ourselves with the outcomes and results. The looping process of my first project proved to be key in our analysis and conclusion. Our project allowed us, as teachers, to provide change and ideas to improve student learning at our school.

The process of my second action research project was very different from the first. While the methodology was similar: plan, act, observe then reflect, the approaches used in the first project were not entirely able to be transferred to the second. Working with a second colleague on the paper, *Energy Knowledge and Misconceptions in Grade 8 students*, we supported each other in our research to improve students’ misunderstandings of energy consumption by exploring our question, “*How can concrete hands-on experience with energy technology improve student understanding and remove misconceptions and myths of real-world applications?*”

Although this project has been published in *Aurora’s Action Research CoP Annual Report, Volume 2* and online at *The Canadian Journal for Teacher Research*, we are continuing the looping process of action research through working with a new group of students in our science and math class every year. This project made me realize that all projects require different approaches, but will continue to grow due to the cyclical nature of action research.

The change and impact I am able to impart on students’ learning within my classroom has convinced me to continue with action research for a third year, participating in two projects. My personal growth and confidence through these past few years of research has increased. I would

encourage other teachers to participate, starting with a topic of interest that they wish to improve or work on, something similar to an annual professional growth plan. Remember that action research can be a fluid research process, allowing for your question, approach or data collection method to change as you reflect and repeat the research cycle. Teachers naturally reflect to learn and improve and reflection is a key component in the cyclic process of action research. The work of a teacher improving his or her craft is never ending.

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