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Action research: Informing professional practice within schools

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This research paper explores the experiences of three teacher-researchers, 'Simone', 'Damian' and 'Michael', who undertook an action research project in their respective schools as part of their postgraduate studies. The paper initially outlines the construct of action research in the light of its applicability to educational research. Particular reference is made to the benefits of action research for those in the teaching profession as well as to several challenges associated with action research. What then follows is the design of the case study methodology that was used to examine the individual experiences of Simone, Damian and Michael. The research used a qualitative paradigm, specifically that of interpretivism, and employed a symbolic interactionist perspective to examine each participant's project as individual case studies. Data collection occurred in two stages. Stage 1 involved three 40-minute semi-structured interviews. Stage 2 entailed follow-up written responses six months after the initial interviews. Findings fall under three major themes: action research as a valuable methodology, the impact of the action research on the school community, and challenges encountered when conducting the action research.

Introduction

Action research is a process of systematic inquiry that enables people to find effective solutions to real problems encountered in daily life (Ferrance, 2000; Lewin, 1946; Stringer, 2008). Action research has had a long and distinguished pedigree that spans over 50 years across several continents (Holter & Frabutt, 2012). 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 (Mills, 2014). Through repeated cycles of planning, observing, and reflecting, individuals and groups engaged in action research can implement changes required for social improvement (Hine, 2013).

Action research is widely regarded as a powerful methodology to improve the educative process (Johnson, 2012; Mills, 2014; Stringer, 2008). Through the use of case studies, this research examines how three teachers perceived and interpreted evidence gathered through action research projects, and how these perceptions and interpretations informed professional practice within their respective schools. As such, it focuses on how these users of action research participated in the collection, analysis, interpretation, and subsequent use of evidence gathered in their schools. Furthermore, the significance and impact of teachers using action research to investigate localised professional practice is highlighted through research participants' testimony.

Purpose and significance

The purpose of the research was twofold. Firstly, it was to examine how teachers perceive and interpret evidence gathered through action research projects conducted within their school environments; and secondly to explore how these interpretations could be used to inform professional practice within their schools. In light of the purpose of the research there were two primary research questions. These are: (i) How do teachers perceive and interpret evidence gathered through action research projects conducted within their schools? and (ii) How has the process of action research informed professional practice at these teachers' schools?

The significance of this research lies in the potential for action research (a) to encourage critical self-reflection in teachers through undertaking such projects, and (b) for teachers to use action research projects as a means to inform professional practice within schools.

Theoretical perspective

The theoretical perspective for the study entailed an interpretive paradigm incorporating a symbolic interactionist lens. Pivotal to the notion of symbolic interaction is the placing of oneself in the setting of the other, of considering situations from the point of view of 'the actor'. Methodologically, symbolic interactionism directs investigators to take, to the best of their ability, the standpoint of those being studied (Crotty, 1998). Consistent with this perspective, the current study enabled the researchers to examine the impact of action research in schools through the experiences and reflections of the three participants implementing the action research projects.

Literature review

Within the teaching profession, action research can be defined as the process of collaborative inquiry conducted by stakeholders to understand and improve the quality of actions on instruction (Hensen, 1996; McTaggart, 1997; Mills, 2014; Schmuck, 1997). Moreover, Mills (2014, p. 8) outlines the goals of educators conducting action research as: "gaining insight, developing reflective practice, effecting positive changes in the school environment (and educational practices in general), and improving student outcomes and the lives of those involved". The action research cycle typically engages educators in a systematic examination of instruction or their practice (Ado, 2013), or an exploration of real problems experienced in schools and a possible course of action (Dinkelman, 1997; Ferrance, 2000; McNiff, Lomax & Whitehead, 1996). According to Ado (2013, p. 133), this cycle "rests on the beliefs that educators better serve their students when they examine and reflect upon their practice and when they specifically consider ways to address challenges that exist in their practice." Action researchers in education, regardless of their particular school of thought or theoretical position, are committed to a critical examination of classroom teaching principles and the effects that teachers' actions have on the children in their care (Mills, 2014). In light of this comment, Holter and Frabutt (2012) suggest that action research in education must be systematic, oriented toward positive change in the school community, practitioner-driven, and participatory.

Benefits

Action research offers many benefits for educators committed to a critical, investigative process of improving school practice, policy, or culture. First, action research can be used to fill the gap between theory and practice (Johnson, 2012) and helps practitioners develop new knowledge directly related to their classrooms (Hensen, 1996). Second, action research facilitates teacher empowerment (Fueyo & Koorland, 1997). Teachers are empowered when they are able to collect their own data to use in making decisions about their schools and classrooms (Book, 1996; Erickson, 1986; Hensen, 1996; Zeichner & Noffke, 2001). Moreover, when teachers are allowed to take risks and make changes related to teaching and learning, student achievement is enhanced (Marks & Louis, 1997; Sweetland & Hoy, 2002), and schools become more effective learning communities (Detert, Louis & Schroeder, 2001).

Third, action research is an effective and worthwhile means of professional growth and development (Osterman & Kottkamp, 1993). Traditional teacher inservices are often ineffective (Barone et al., 1996) and generally do not give teachers sufficient time, activities, or content to increase their knowledge or affect their practice (Birman, Desimone, Porter, & Garet, 2000). Teacher inservices on action research offer a way for teachers to reflect critically on their practice (Cain & Harris, 2013; Darling-Hammond & McLaughlin, 1995; Hodgson, 2013), stimulate change in their thinking and practice (Furlong & Salisbury, 2005; Zeichner, 2003), and promote self-improvement and self-awareness (Judah & Richardson, 2006). 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 (Hine, 2013). 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 (Hine, 2013).

Challenges

In addition to the numerous benefits action research offers educators, there are several challenges associated with this research methodology. First, teachers may find that it is a time-consuming process to conduct research in addition to the demands of their own instructional practice (Bailey, 1999; Hine, 2013; Wong, 1993). As such, these demands may impede the methodological rigour of data collection and critique (Waters-Adams, 2006). As a corollary to the demands of the teaching profession, several authors cite the conflict between teaching and researching as detrimental to the quality of instruction given (Foster & Nixon, 1978; Wong, 1993). Second, and because action research is carried out by individuals who are interested parties in the research, the validity of collected and analysed data may be questionably biased (Waters-Adams, 2006). Brown (2002) amplifies this comment by suggesting teacher-researchers may find it challenging to distance themselves from the situation being researched, and therefore, unable to attain an objective viewpoint. A third challenge faced by action researchers is to suspend any preconceived ideas of what the potential solution(s) to the problem might be (Hine, 2013). In acknowledging a key tenet of action research, researchers must follow the 'observe-reflect-act' process (Stringer, 2008). Therefore, assuming a course of action without enacting a rigorous methodology may be counterproductive to the research efforts overall. Instead, researchers must first speak to all project participants before arriving at a decision on how to proceed logically with a plan towards improvement.

Professional practice context

At The University of Notre Dame Australia, the unit *Action Research in Education* is offered to Master of Education students in Semester One each year. The authors of this paper coordinate and teach this unit. 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 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 comprises 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.

After 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 are 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.

Methodology

Case study

This research project was planned around case studies (Berg, 2007) of three participant teachers who implemented action research projects at their schools. Case study was selected as the study design because, consistent with a symbolic interactionist approach, it attempts to bring out details “from the viewpoint of the participants” (Tellis, 1997, p. 1) and makes use of such methods as interviews and content analyses of written documents (Patton, 1990). The three case studies formed a collective case study structure (Stake, 1994). The purpose of this structure was to explore each case jointly to better understand how ways undertaking action research in schools can inform professional practice within schools.

Three reasons are advanced as to why the three teacher-researchers, known respectively as ‘Simone’, ‘Damian’ and ‘Michael’, were purposively selected as case studies. First, they all exhibited a substantial level of competence, determination and enthusiasm in completing the postgraduate unit *Action Research in Education* to a very high standard. Second, they continued their action research project well past the completion date of the unit. Third, as a result of their action research project, all three participants’ action research projects demonstrated a significant positive impact in their schools. Table 1 outlines the specific case studies including the pseudonym of the participant, the specific action research project undertaken by the participant, and the type of school where the participant initiated the action research. All three participants teach in Catholic schools. What then follows is an overview of each of the three case study participants.

Table 1: Case studies

Participant (pseudonym)	Action research project	School
Simone	Finding ways to increase the participation rate of teachers involved in a voluntary peer observation and feedback process.	Year 7-12 Girls
Damian	Finding a way to improve professional development and professional learning practices at our school	Year 7-12 Boys
Michael	Finding a way to enhance student behaviour in the playground.	Year 4-6 Boys

Case study one: Simone

Simone is a Head of Professional Learning who conducted a research project designed to investigate how to improve a *Peer Observation Program* operating at her secondary school. Initially Simone sent out a survey to all staff, and upon receiving a relatively low response rate, re-issued the survey with the option of anonymity offered. After receiving an improved response rate, Simone examined the preliminary data and identified two groups of staff: *Supporters* and *Resistors*. Focus group interviews conducted with *Supporters* and *Resistors* sought to elicit reasons underpinning their support for or resistance to the Peer Observation Program. Following an analysis of data, the researcher took action. Simone (i) organised a full professional development session that communicated the key, positive features to the staff; (ii) invited an expert on the peer observation process to speak to staff; and (iii) developed a revised, voluntary Peer Observation Program for staff. At the time of the interview, Simone was managing the peer observation process for 50 staff involved in the program (more than half of the school staff) and collecting data from these participating staff in an attempt to continue the action research project.

Case study two: Damian

Damian is a Head of Professional Learning who explored ways to improve the profile of the existing professional development program at his secondary school. In particular, Damian wanted to overhaul radically the *Staff Mentor Program*. At that time, Damian had been tasked with

leading a committee of school personnel responsible for the revitalisation of teacher in-service 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, Damian purposively sampled staff for follow-up interviews. The results of the interviews were analysed and presented to the committee, which 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 (ii) present this framework to the school principal for consideration.

Case study three: Michael

Michael is a Head of Junior School who investigated ways to reduce the number of playground incidents resulting from primary students not adhering to the playground policy rules. The aim of the project was to find ways to promote student compliance in the playground and to engender a more harmonious school environment. At this school, students are encouraged to be active during their recess and lunch periods and a number of play areas are available to them including an oval, handball courts, playground equipment, and a large multi-purpose activity area. For the data collection phase of his project, Michael issued a questionnaire to all teachers, parents, and students of the Junior School community. Those individuals who responded to the questionnaire were subsequently invited to participate in a focus group interview. Michael designed both the questionnaire and the focus group interview so that all participants were able to offer an opinion of the current playground behaviour policy. After all data were recorded, transcribed and collated, Michael presented the key findings to a staff committee. Based on these key findings, the committee (i) discussed and implemented changes to the policy and (ii) informed all staff of these changes at the next Staff Meeting. Michael has continued to conduct research into this phenomenon after the first iteration was complete.

Data collection

Stage 1

Stage 1 involved the initial experiences and reflections of the three participants and occurred approximately six months after completion of the postgraduate unit *Action Research in Education*. These experiences and reflections were obtained through three individual 40-minute semi-structured interviews. The interviews were held on the school sites of each participant and were digitally recorded with permission and subsequently transcribed by a third party. Participants reviewed the transcriptions as a means of enhancing credibility (Erlandson, Harris, Skipper & Allen, 1993). The two investigators also took notes during each interview. The interview questions are listed in Table 2.

Table 2: Stage 1 interview questions

1	What does action research mean to you?
2	Describe the steps of your action research project.
3	What do you see as your role (s) regarding this action research project?
4	Why have you continued with this action research project after the completion of the unit <i>ED6765: Action Research in Education</i> ?
5	Describe how action research has effected any changes within the school's practices, or within the school community.
6	Discuss any obstacles that you have encountered during the action research process.
7	Is there anything else you would like to comment on regarding action research?

Stage 2

The second stage of the data collection occurred approximately six months after the initial interviews. Participants were contacted by email and invited to review the progress of their action research projects over that time. In particular, they were asked to consider the impact that their projects were having on the school community and to reflect on their own involvement in the project (Table 2). Participants could respond to the questions either by email, or if they preferred, through a phone conversation. All opted to reply by email.

Table 3: Stage 2 reflection questions

1	Could you comment on the extent to which the action research project has impacted (or is impacting) your school community?
2	Could you comment on your involvement in the project?

Data analysis

The format for analysing the data for both Stages 1 and 2 was consistent with that described by Miles and Huberman (1994). The format entailed data collection, data reduction, data display and conclusion drawing/verification. First, each researcher read the interview transcriptions (Stage 1) or email replies (Stage 2). The data were then reduced through the use of emerging themes (as headings), each researcher selecting segments of language that highlighted particular themes. These segments were then displayed visually under each theme heading and both researchers perused each list and jointly selected appropriate exemplars of each theme. Human Research Ethical clearance was obtained from the University of Notre Dame Australia and the Catholic Education Office of Western Australia to allow the researchers to interview the three participants. As a matter of procedure, permission was obtained from the principals of the three schools as well as the participants.

Findings: Stage 1

Value to school community

All three participants described the concept of action research in terms of a valuable process to investigate a critical issue of concern in their schools. For instance, Michael remarked that action research allowed him to explore in detail “a particular topic using a variety of vehicles to gather data”. He noted that he was able to use gathered data to “influence policies and school organisation” in a positive way. Similarly, Simone described action research as a process designed to delve “deeply into issues so that [teachers] can acquire a range of views”. She commented on the value of action research as a means for obtaining “people’s perspectives on different issues” and noted, “by including people in the process [teachers] are more likely to get joint ownership”. Damian also highlighted the importance of action research as a means to consult and acknowledge “people who would be most influenced by the intended change”. He believed that action research ensured “key stakeholders have ownership, that they feel their finger on the research, and that they can see where they have been consulted.”

Critical to the success of their action research projects was the fact that each participant chose a topic that was decidedly relevant to his or her role in the school. Michael commented that his action research topic “evolved from an actual school playground compliancy issue that was causing some concern”. He noted that associated with this issue “was a staff communication problem related to the reporting” of inappropriate student behaviour. Simone’s topic dealt with the introduction of a Peer Observation Program “that aimed at breaking down some of the classroom isolation experienced by some teachers”. She believed that by “engaging in an action research project that sought people’s opinions the Peer Observation Program would be better received”. Damian used the action research approach to “tap into what people really thought about the Staff Mentoring Program”. He was confident that action research would provide answers to questions such as: “Is the mentoring program serving the needs of the subject teacher?” Does the program “give a clearer understanding of what good teachers do?” Does the

program “help with determining some type of career path?” And lastly, “how does one’s professional development have synergy with the staff mentoring program?”

Various cycles

Participants commented on the need for various phases or cycles of data collection to refine the studies. As an example, Simone sent a survey out to 100 staff to determine their reaction to a Peer Observation Program. She was interested to see if the survey “would reveal any factors that would indicate why some supported and some were not supportive”. She received only 30 responses and noted that, “in hindsight, the low return was because I asked respondents to place their names on the questionnaires”. Simone’s next step was to run a focus group with supporters to “identify reasons behind their support”. Following this focus group Simone found herself “at a standstill” since, as she observed, “I needed feedback from the resisters”. In the end, she “tapped people on the shoulder” and managed to assemble a small group of the resisters. What she found was that people felt threatened by the proposed Peer Observation Program – it brought back “bad memories of teaching practice experiences”. In the next stage, Simone organised a full staff professional development session and employed a well-respected keynote speaker to communicate the key positive features of Peer Observation.

Impact

All three participants remarked on the impact of undertaking an action research project at their school. For example, Michael stated, “action research benefits the school since you come up with a policy that is tailor made for a specifically identified situation”. Explicitly, he observed the “positive consequence in the reduction of the number of playground non-compliance behaviours”. Michael commented on “the growth of a more positive culture in the school and a growth of student-based initiatives”. He remarked on how “students have been empowered to see situations and diffuse non-compliance behaviour so that it does not become a major issue”. Further, Michael observed, “we’ve moved from establishing a policy to identifying strategies that will add to the pastoral nature of the school”. One particular strategy, Michael noted, was the introduction of a Year 6 retreat held off campus, the aim being “to empower the Year 6 students”.

Challenges encountered

Simone had gone through a somewhat challenging process in attempting to introduce the Peer Observation Process. However, she believed that staff members had become more supportive, particularly following the full staff professional development session. She remarked on an evolving attitude of “I get it now, I’m prepared to give it a go”. Simone indicated that she stated that the Peer Observation Program has expanded to 50 people where “each Learning Area has adopted an organisational approach that best suits them”. She intended to arrange another round of focus group discussions “where I can get a more critical analysis of the way the program has been implemented up to this date”. In particular, Simone hoped that these focus group discussions would provide “suggested refinements for next year (2014)”.

Damian used action research primarily to improve his school’s Staff Mentor Program. He indicated that he was dealing with a largely supportive and accommodating staff and was conscious of acting in such a way as not to influence staff opinions. Damian emphasised that during the process there was constant referral back to the first stage of the action research model. That is, staff members were continually asked: “What are your needs? How would you like your needs to be served in the new model?” Moreover, staff members were given the opportunity to comment on the efficacy of the revised Mentoring program. Damian noted three outcomes from the action research project: teachers were provided with a broader reference to identify their strengths and weaknesses; “professional conversations” were “introduced into the staff meeting arena” with a view to supporting appropriate professional development opportunities; and there was a concerted effort to ensure that “professional development attendances matched identified professional development needs”.

Participants were asked to identify challenges in implementing their action research projects. They highlighted three. First, as Michael noted, the process can, at times, be “taxing” in the sense that action research can be a “long protracted process”. Second, Damian remarked on the absolute importance and challenge of ensuring “confidentiality and privacy protocols” in the work situation. Michael also made this point with respect to guaranteeing “genuine” data. Finally, Simone observed that it is easy “to have critical discussions with people you feel comfortable with”. The challenge for Simone was to have discussions with people she did not feel comfortable with. As she stated: “this situation required me getting out of my ‘comfort zone’ and prioritising such interviews”. Notwithstanding these challenges, all three participants commented on the value of the action research process. They remarked on the strength of action research to involve all stakeholders in the decision-making process. Moreover, they noted that, despite the length of time involved, the process is highly worthwhile because, in the words of Michael, “the end product is seen within the school environment as being a valuable change”.

Findings: Stage 2

Impact on the school

Simone, Damian and Michael all commented on the continued impact of their action research project on their schools. For example, Simone noted, “my action research project continues to impact on the school community in the development of our professional learning expectations for teaching staff”. She reported that at the end of 2013 the College Principal indicated to Heads of Learning Area that feedback from peer observation would be “integrated into the reflection/interview process” of annual reviews for teaching staff. Moreover, she indicated that approximately 40 staff would be conducting peer observations throughout 2014. As Simone remarked, “although peer observation is not yet culturally accepted as something we do here at the College, we continue to progress towards that goal.”

Michael commented that the action research project which he conducted “has had a very positive impact on the school community.” He observed that data collected have been used in policy formation where a “completely new Playground Policy was implemented” as a result of the research. He noted, moreover, that the research was “also very valuable in formulating a new pastoral care policy”.

Continued involvement in the project

All three participants reported on their prolonged active role in their action research projects. Simone stated that since the initial interview “I have continued to raise the validity and positive effect on peer observation at our Academic Council”. At the end of 2013 she conducted professional development with the Heads of Learning Area, “taking them through the AITSL [Australian Institute for Teaching and School Leadership] performance development framework, emphasising the importance of peer observation as effective practice”. She also continues to encourage Heads of Learning Area “to facilitate peer observation among colleagues in their own learning area”.

Michael’s project is considerably advanced. In reflecting on his role he remarked: “my involvement in the project was major in that I initiated the policy reviews and facilitated the change after consultation with the whole school community”.

Discussion

The purpose of the research was to examine how teachers perceive and interpret evidence gathered through action research projects conducted within their school environments, and to explore how these interpretations could be used to inform professional practice within their schools. The data collection comprised an examination of the experiences and reflections of three participant teachers who implemented action research projects within their schools. The data from the initial interviews (Stage 1) categorised the participants’ perceptions under three

conceptual themes. These were valuable methodology, impact on school community, and challenges encountered. The follow-up written responses from participants (Stage 2) underscored the ongoing impact of the project on the school community along with the critical role of the participant in project implementation. Each of these themes is now considered in light of the literature pertaining to action research.

Valuable methodology

All three teacher-researchers highlighted that action research provided them with a valuable research methodology to examine what they considered to be a critical issue within their respective schools. They drew attention to the action research process whereby multiple cycles were needed to completely understand the problem, gather enough meaningful data, and to implement positive, school-wide change. In addition, the teachers emphasised that action research enabled them to engage fellow colleagues in the problem-solving process, and to empower these colleagues in taking collective ownership of the particular issue. By adopting a collaborative approach to their action research projects, these teachers were able to identify, plan, and implement changes needed for school improvement.

Comments from the teacher-researchers are consistent with literature that affirms action research as an appropriate methodology to explore localised issues in significant detail (Meyer, 2000) by engaging a range of research participants (Mills, 2014). Scholars such as Ado (2013), Frabutt et al. (2008) and Stringer (2008) highlighted the systematic and cyclical nature of the action research as a process whereby multiple cycles were needed to completely understand the problem, gather enough meaningful data, and to implement positive, school-wide change. Additionally, the teachers emphasised two aspects of their action research projects noted by commentators. These aspects were that action research enabled them to engage fellow colleagues in the problem-solving process (Hine, 2013), and in turn, empowered these colleagues in taking collective ownership of the particular issue (Fueyo & Koorland, 1997). By adopting a collaborative approach to their action research projects, these teachers were able to identify, plan, and implement changes needed for school improvement.

Impact on school community

The teacher-researchers outlined that the action research process positively impacted on their respective school communities. In support of various commentators' work, a common remark from the teacher-researchers was that the 'observe' and 'reflect' stages of the process assisted teachers in gaining clear insight regarding a particular issue (Mills, 2014) before implementing changes to school culture and policy (Holter & Frabutt, 2012). In particular, the teachers underscored several aspects of action research methodology consistent with literature. These aspects included the collaborative (Kemmis & McTaggart, 1988) and participatory (Holter & Frabutt, 2012; Mills, 2014) nature of action research across all of the stages and numerous iterations (Johnson, 2012; McTaggart, 1997). In both stages of data collection, and in accordance with Meyer (2000) and Stringer (2008), teachers commented that because the implemented changes had been 'tailored' to suit their particular students, staff, and school community, the impact was demonstrably positive.

Challenges encountered

In addition to the numerous claims by the teacher-researchers that action research had positively benefitted their respective school communities, they voiced some challenges associated with the research methodology. One commonly cited challenge consistent with available literature was the protracted time-frame associated with the action research process (Bailey, 1999; Hine, 2013; Wong, 1993). The extra time spent engaging with the action research process required the teacher-researchers to conduct research during non-teaching times, and to manage time more effectively overall. None of the interviewed teacher-researchers indicated that a decrease in the quality of instruction had resulted from conducting research, a notion supported by Foster and Nixon (1978) and Wong (1993). Moreover, teacher testimony in Stages 1 and 2 suggests that

prolonged engagement with a given problem is required to effect demonstrable change within schools. As highlighted by several authors (Brown, 2002; Water-Adams, 2006), a second challenge involved teachers questioning the validity of collected data. To address the issue of how 'genuine' data were, teacher-researchers interviewed a broad sample of participants to access multiple viewpoints concerning a particular issue. Moreover, each teacher-researcher deliberately involved other key staff in the data analysis and implementation stages of their projects. Doing so enabled others' perspectives to be voiced and considered, reinforcing the participatory and collaborative nature of action research. Such participation and collaboration is consistent with the findings of several writers (Holter & Frabutt, 2012; Mills, 2014). While all three teacher-researchers proffered various challenges associated with action research, they also claimed that action research was a personally and professionally rewarding experience.

Conclusion

This paper explored how teachers perceive and interpret evidence gathered through action research projects conducted within their schools, and how these teachers were able subsequently to use key findings to inform professional practice. As such, this research highlights the importance and value of action research within education. In addition to the body of literature already suggesting action research is a valuable exercise for teachers to undertake (Hine, 2013), the testimony of three teacher-researchers underscores the utility of this research methodology within schools. First, it offers teachers a systematic (Frabutt et al., 2008), collaborative (Kemmis & McTaggart, 1988), and participatory (Holter & Frabutt, 2012; Mills, 2014) process of inquiry that actively engages them with specific issues of concern. Second, the action research process provides teachers with the technical skills and specialised knowledge required to be transformative within their professional domain. That is, it enables teachers to effect positive change within classrooms, schools, and communities (Johnson, 2012; Stringer, 2008). Third, while this paper has reported on only three teacher-researchers undertaking research projects in their respective schools, there is evidence (both in the action research community, and in the Findings) to propose that action research can allow teachers to be innovative in their professional lives. Having an innovative approach towards school improvement suggests that there is considerable scope for teachers wishing to develop 'customised' action research projects of their own (Hine, 2013). In developing research projects specifically tailored to the needs of a particular learning community, practitioners are empowered to find localised, practical solutions required for effective change to take place.

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