

Action Research and Teachers' Professional Development: Examples and Reflections

Osama M. Almahdi¹

¹ Educational Studies Department, Bahrain Teachers College, University of Bahrain, Kingdom of Bahrain

Correspondence: Osama Almahdi, Educational Studies Department, Bahrain Teachers College, Zallaq P.O Box 32038, Kingdom of Bahrain. Tel: 00973-17437286. E-mail: oalmahdi@uob.edu.bh

Received: September 17, 2019; Accepted: September 30, 2019; Published: October 1, 2019

Abstract

Teacher professional development had received a growing interest in the past decades due to their importance in improving teachers' knowledge, skills and values. There are various approaches and types of teachers' professional development. This paper begins by discussing the definition, characteristics and models of teachers' professional development. Then it outlines some ideas related to teacher professional learning communities (PLCs), communities of practice (CoPs), mentoring and coaching. Next, the paper focuses on action research as one of the widely used approaches in both research and teacher professional development. The potential benefits of action research in building teachers' professional capacity is presented next. The paper concludes with a discussion about the implications of utilizing action research in the educational development program for school principals in Bahrain Teachers College.

Keywords: teacher professional development, action research, communities of practice, Arabian Gulf countries

1. Introduction

Teachers are considered as an important factor in promoting student knowledge, skills and values. Teachers, like other professionals are required to continue learning to update their knowledge and skills along with the continuous changes in their societies. The overarching goals of this paper are twofold: firstly, to discuss the concept of teachers' professional development: its importance, definition, characteristics and models. Secondly, the paper focuses particularly on action research: its methodologies, models, examples, and its potential benefits for improving school effectiveness.

A number of authors have recognized the importance of using action research in teachers' professional development. For instance, Mertler and Hartly (2017) indicated that since the 1980s, action research has been considered as a good alternative to typical in-service teacher training because of its various potential benefits and applications. For example, action research can help teachers to investigate their own practices in systematic ways, help them to reflect on their work, and find out more about their weaknesses and strengths. It also adds to their professional growth as it allows them to focus on specific aspects of their teaching practices and decide on ways for further improvement. In addition, action research promotes capitalizing on teachers' existing knowledge and encourages them to develop a sense of ownership of the meaningful knowledge they can create. Cunningham (2011) suggested that action research can foster and support professional learning communities and can contribute to leadership capacity as it guides teachers to work for deep understanding, commit to reflective practice, and build a culture of collaborative work.

Many educational systems around the world is shifting from traditional types of professional development such as, workshops and lectures to a more active, collaborative, job-embedded, reflective and sustainable types of teacher professional development. Looking at the researcher's context, there is a growing interest in using action research as a new approach to educational professional development in the Arabian Gulf Cooperation Countries. The researcher hopes that this paper will contribute to the current efforts in promoting productive and effective teachers' professional development in the region by discussing best practices that is shaped by international standards and also connected with the local needs.

2. Defining Teachers' Professional Development

Teacher learning and continuous professional development are influenced by various factors such as policy, practice and professional culture. This section discusses different definitions of teachers' professional development.

Bolam and McMahon (2004) noted that several terms related to continuous professional development are found in the literature, including: teacher development, in-service education and training, staff development, career development, continuing education and lifelong learning. These terms have overlapping meanings and different definitions. In a recent report, Darling-Hammond et al. (2017) defined effective professional development as “structured professional learning that results in changes to teacher knowledge and practices, and improvements in students learning outcomes” (p. 2). They conceptualize professional learning as “a product of both externally provided and job-embedded activities that increases teachers’ knowledge and help them change their instructional practices in ways that support students learning” (p.2). Through their critical analysis of 35 studies, Hammond et al. found widely shared features of effective professional development activities, they can be summarized as follows: they should be content focused, linked to specific curriculum content, and within teachers’ contexts. They should also incorporate active learning and let the teachers engage in the same style of learning they designed for their students (e.g. using authentic materials, interactive activities, and collaborative learning strategies to offer embedded and contextualized professional learning. In addition, they support collaboration among teachers and allow them to share ideas and work together in job-embedded contexts and use models of effective practice, where these models may include lesson plans, unit plans, sample student work, observation of peer teachers, and video or written cases of teaching. Effective professional development also provides coaching and expert support, which involves expertise sharing ideas about content and evidence-based practices closely related to teachers’ individual needs. Finally, effective professional development offers feedback, reflection, time for teachers to think about and receive input, and then make changes to their practices.

Guskey (2000, 2002) pointed out that effective professional development programs usually focus on changes in three areas: teachers’ classroom practices, teachers’ attitudes and beliefs, and in students’ learning outcomes. Guskey presented the following types of teachers’ professional development:

The most common type of professional development is training where one or more trainers would share their experiences with a group of trainees using different group activities such as discussion, role-playing and skill demonstrating. Training is preferred by many educational organizations because it is cost effective, and allows for training large numbers of trainees in a short period. The second type of professional development is observation and assessment. This process allows teachers to observe others or to be observed by their peers. This process also includes reflecting and analyzing the information received after the observation. Observation can be useful for the observer and the person being observed as it encourages exchanging ideas and experiences, but it also entails a good deal of commitment and planning. The third type of professional development is when teachers work together on collaborative projects such as, curriculum development, programs designing, and planning strategies for improving teaching practices or solving a practical problem. Project work needs lots of preparation, researching, dialog and reflection. In this process, teachers can increase their knowledge and skills through collaborative work and decision-making. The fourth type of professional development is study groups, which involves a group of teachers working together in small groups to find solutions for a shared challenge in their classrooms. This type of work needs coherent structure, reflection and decision-making skills. The fifth type of professional development is action research where teachers engage in systematic inquiry, formulate their research questions that are linked to their own teaching practices, collect and analyze data, find results, and reach practical solutions. Action research can help teachers to be more reflective and more capable of making connections between theory and practice. There will be more elaboration about this type of professional development in another section of this paper. The sixth type of professional development is individually guided activities. Teachers here define their own individual goals and work systematically to achieve them. The progress of teachers’ work can be tracked through journal writing, self-assessments and portfolios. These different professional activities can be all connected when teachers engage in professional development communities.

3. Professional Development Communities

Teacher communities play an important role in their professional development. This section offers an overview of the professional development communities’ concept. Kyndt et al (2016) divided teachers’ learning activities undertaken in their daily practice into two main categories: (a) individual learning activities (such as data collection, reflection, and dealing with difficulties) and, (b) learning activities performed with other colleagues (such as collaboration, exchanging ideas, practicing in extracurricular activities). Vangrieken et al (2017) suggested that there are two dominant theoretical frameworks related to these collegial practices: teacher professional learning communities (PLCs), and communities of practice (CoPs). According to Vangrieken et al, traditional isolated or one-shot workshops were considered insufficient to develop teachers’ knowledge and skills, PLCs were thought to add more value for school reforms and teachers’ professional development because they can lead to more collaborative decision-making, increasing teachers’ satisfaction, and improving students’ outcomes. School

improvement and students' achievement have been positively connected to teacher professional learning communities (e.g. Hofman and Dijkstra, 2010; Schechter 2008). DuFour et al. (2005) defined professional learning community as educators committed to working collaboratively in an ongoing process of collective enquiry and action research to achieve better results for the students they serve. PLCs work under the assumption that the key to improve students' learning is continuous, job-embedded learning and professional development for educators. The common goal of community models is to promote collaboration among teachers by creating professional culture (Stoll et al, 2006). Successful implementation of PLCs requires that an organization of teachers and administrators work collaboratively in an ongoing process of structured inquiry and action research for the purpose of achieving better results for their students by ensuring high levels of learning for all (Battersby & Verdi, 2015).

Many researchers around the world emphasized that mentoring and coaching – as part of the professional development communities - are beneficial professional development approaches for school principals. For example, Moyle (2016) noted that coaching and mentoring strategies are widely used in Australia for deliberate school improvement in areas like improving students' learning outcomes, approaches to teachers' in-service professional learning and the use of conversation and observations to improve educational practices. In Singapore, Pak Tee Ng (2012) examined the practices of mentoring and coaching in the educational system and discussed issues and challenges involved in their implementation. The results showed that mentoring is used as an important element of training beginning Singaporean school leaders. Coaching is also used as part of the performance management system for all school leaders there. However, mentoring and coaching can cause tensions when it is connected with performance appraisals rather than professional development. In addition, Castanheira (2016) conducted a literature review that analyzed 37 research papers related to the topic of mentoring in schools. The results of the meta-analysis indicated that mentoring is seen as one of the most important factors that contributes to the educators' professional development. Both the mentor and the mentees would benefit from this approach. These benefits include impact on performance, reduced staff and teacher turnover, and bring about greater advancements in work practices. The analyzed studies also identified social and psychological benefits that include increasing confidence for both mentor and mentees through the establishment of partnership and an enhanced sense of organized culture and loyalty toward the organization. The following section discusses action research as one of the important approaches in teachers' professional development as it can incorporate various approaches of professional development such as school professional observation, learning communities and coaching.

4. Action Research Methodology

Research is a systematic search for knowledge of existing phenomena which are unknown. Through this systematic process, the researcher will search for adequate information to answer particular questions and reach objective knowledge of a specific topic. Research also searches for knowledge to build a new theory or test an existing one. Research can be descriptive or analytical, applied or fundamental, qualitative or quantitative, based on field or library data and deductive or inductive. There are various research types such as experimental research, descriptive research, correlational research and ethnographic research. The main characteristics of research that it is controlled, systematic, verifiable, and critical. Research is important because it provides people a voice for them to speak, with evidence that supports their claims. It is also important for improving the wellbeing of societies and human life. Research is also essential for formulating policies and solving problems. It enables researchers to test existing theories and generate knowledge (Cohen, Manion & Morrison, 2018; Mligo, 2016). To sum up, research is a way of understanding our physical, social and psychological world through using the scientific method of observation and finding a problem, speculate an explanation for the problem, and test those speculations (Cary, 2011).

Action research is one of the widely used approaches in educational research. The term action research was made popular in the late 1940s to describe a systematic work in the field to solve a problem or answer an important question about professional practice. Kurt Lewin, the founder of the social psychology developed the idea of action research as a more democratic way for improving professional practice rather than applying traditional research methods. He also argued that one cannot fully understand human behavior without also understanding the context in which the behavior occurs. In the past four decades, action research became a very strong influence on the way practitioners and applied researchers work in the field (Willis & Edwards, 2014a). The main aim of action research is to improve practice and to understand and generate knowledge about educational practices and their complexities. Action research uses a variety of research methods and it is often done by practicing professionals rather than research professionals, with practical purpose rather than a theoretical one. Reason and Bradbury (2001) defined action research as “a participatory, democratic process concerned with developing practical knowledge in the pursuit of worthwhile human purposes, grounded in a participatory worldview, which we believe is emerging at this historical moment. It 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” (p.1). There are three paradigms influencing the research epistemology in general: positivism, interpretive theory and critical theory. The positivist paradigm views human behavior as essentially rule governed; and human behavior should be investigated by the methods of natural sciences. Studies based on this approach are often carried out in a controlled environment, relying on statistical data and aiming to answer questions which look at; for example, issues of cause and effect. The interpretive paradigm rejects the positivists’ view of the regulation of human behavior because it overlooks the complexity of social interactions. The interpretive paradigm tries to look to the multifaceted actions through understanding the individuals’ perspectives that are part of these ongoing actions and the situations and contexts that are holding them (Cohen et al 2018). The critical theory researches the relationship between education and power and it also tries to offer people the basic knowledge and understanding to emancipate them from oppression (Coghlan & Brydon-Miller, 2014).

5. Action Research Models

Action research can follow the positivist, the interpretive or the critical theory paradigms. Action researchers who follow the positivist paradigm would search for well-defined technical solutions to well-defined problems of practice. These solutions to be tested may be selected before the action research through experts looking for generalizable knowledge. This is also called technical action research where the theory is used as a guide to make research decisions, and quantifiable measures are used to generalize from a sample to a population. In the other hand, action researchers who follow the interpretive theory may search for local solutions to local problems that were identified by the participants through collaboration. The problem and the solution may change as dialog, reflection and evaluation, would help participants to refine their overall understanding of topic/theory at hand. Here, theory is de-emphasized and there is more interest on seeking local knowledge (e.g. creating subjective meaning and avoiding generalizations). In the action research which follows the critical theory, participants identify local instances of broad issues that are commonly encountered in their context and work toward emancipatory goals related to those issues and their contexts. The term emancipation encompasses the goals of raising critical consciousness in both individuals and groups, as well as implementing actions that empower the oppressed (Willis & Edwards, 2014b). In general, these three types of action research share the emphasis of the following characteristics: action research is field based, follows the scientific research process, aims to solve a local problem, and consists of a series of cycles (also described as iteration or recursion).

Most models of action research have four to eight phases that are organized into an iterative spiral. The eight stages model of action research consists of the following stages (Cohen et al 2018):

1. Identification, evaluation and formulation of the problem perceived as significant in an everyday teaching context.
2. Initial discussions and negotiations among the interested parties such as teachers, researchers and practitioners to write a draft proposal.
3. Review of research literature to learn from comparable studies.
4. Modification or refinement of the initial research problem if necessary.
5. Selection of research procedures such as sampling, teaching methods and required resources and staff.
6. Selecting the appropriate evaluation procedures.
7. Implementing the intervention over varying periods of time.
8. Interpretation of the data, drawing inferences and evaluating the overall project.

According to Reason and Bradbury (2006), action research responds to practical and important issues in the lives of people in their own work environments, it engages with people in a collaborative a relationship which encourages dialogue and development. Action research draws on different research methodologies (e.g. qualitative and quantitative) and methods (e.g. interviewing, focus groups, surveys, social networking and data gathering) generating diverse forms of presentations. It is based on an emergent process which are often not pre-determined, but changes and develops as those who are engaged deepen their understanding of the issues to be addressed. The distinction between researchers and subjects can become blurred in the course of a lengthy and collaborative relationships.

6. Examples of Using Action Research in Teachers’ Professional Development

In the action research approach of professional development, teachers work together in teams to tackle an issue related to their common interest and related to their classroom contexts. The team then define the issue, investigate and research it. They also plan possible actions to solve this issue, take actions, observe, document the results,

reflect on the outcomes and create an action plan to address this issue further. This approach of professional development has numerous strengths, such as, it can help teachers become more thoughtful practitioners, empowers teachers to take actions, search for answers for their own distinctive problems and help teachers collect empirical data rather than anecdotal views, and use them to take informed decisions in their classroom (Gaible & Burns, 2005). However, action research has some limitations as it can be complex and demand high level of competencies and skills, and it can also be difficult to implement and sustain especially when teachers are not well trained.

There are many recent studies which investigated using action research in teacher professional development in different parts of the world. In the United States, Gujarati (2018) presented an overarching action research method connected by 12 individual action research studies to explore what a cohort of preservice elementary Master of Arts in teaching candidates learned from the process of action research as a (re)imagined form of authentic professional development to aid with students' achievement. Gujarati study incorporated a reflective stance into teachers' daily routine and a willingness to critically examine one's teaching in order to improve it. The study also incorporated critical friend groups (a form of professional learning communities (PLCs) as an important part of the research and reflective processes). The qualitative analysis of the interviews with the preservice teachers showed that action research was a form of empowerment that enabled the teachers to learn from each other and expand their knowledge base for teaching. It also allowed them to be continuous learners in the classroom and in their practice. Action research also helped the teachers to build networks of support and grapple with real issues pertinent to their students in the classrooms.

Also in the United States, Shanks (2016) reviewed teacher candidates' use of action research and the professional learning community (PLC) concept to support their work in the pre-student teaching field experience. 36 teacher candidates were involved in a professional development school relationship that uses action research and PLCs to support candidate growth as teachers. They used these approaches to improve their lesson planning, classroom instruction, and assessment. The findings indicated that these two approaches were helpful for teacher candidates to improve their skills under the high pressure of their teaching responsibilities and to learn more about their practice.

In Ireland, Hanafin (2014) conducted an action research project that investigated the application of multiple intelligences theory in the classrooms and schools. It shows how this theory was used in the project as a base for suggestions to generate classrooms experiences; how the 30 participating teachers evaluated the project; and how they responded to the professional experience. The findings of the study indicated that the action research project helped the teachers to believe that using multiple intelligences theory delivers direct benefits to their students learning, motivation and self-learning.

In Canada, VanOostveen (2017) discussed an action research project that addressed issues of inadequate teacher interaction around pedagogical structures and processes, insufficient opportunities to access and add to the professional knowledge based and a perceived lack of teacher control of the teaching environment enabling them to make decisions that they consider appropriate for their local classrooms. The action research approach allowed the teachers to grow in a number of dimensions; for instance, they shared experiences among the group members and these experiences became a source of information that the other teachers heard and absorbed. The project also encouraged teachers to initiate student reflection, others led to new ways of using scientific observation of everyday objects to encourage student thinking about them in different ways.

In Malaysia, Amin et al. (2019) explored the implementation of actions research component in teacher education by providing brief background information of action research in Malaysian teacher training institutes. Then it discussed issues and challenges encountered in terms of curriculum, teaching methods and objectives. The study also discussed the rationale for the integrating action research component in the teacher education program. The results showed that the implementation of action research was hampered by the absence of exposure to action research in the earlier parts of training, the curriculum lacked practical input and the objectives set can be general and vague. The study recommended that action research workshops and trainings should be conducted earlier in the training program, with more hands-on learning experience introduced.

In the Philippines, Morales et al. (2016) explored mathematics and science teachers' conceptions and their needs on action research. Interviews and surveys were used to investigate the teachers' views. The findings indicated that the teachers had positive views about action research in terms of its usefulness in improving student learning in science and mathematics and in promoting lifelong learning. However, the teachers indicated that they faced difficulties in conducting action research due to their lack of skills in statistics, data organization, literature review and report writing. Recommendations include the necessity of professional development in the area of action

research as well as providing teachers with better opportunities for theory-based influenced teaching in their classrooms.

7. Action Research in the Gulf Cooperation Countries

It is worth mentioning that there is a growing interest in using action research methodology in the Gulf Cooperation Countries (GCC): Saudi Arabia, Bahrain, Kuwait, United Arab Emirates, Oman, and Qatar. For example, in Bahrain, Al-Mahdi (2012) conducted an action research which aimed to explore using authentic learning and ethno-mathematical ideas in teaching history to primary preservice mathematics teachers. The study aimed to explore new strategies to raise candidate teachers' awareness about the cultural and social dimensions of learning, teaching and using mathematics through looking into social history and the everyday learning activities of the students. The study challenged some of the dominant views of the teacher candidates about learning mathematics in particular and tried to attract their attention to a different perspective of learning and mathematics education which is more influenced by cultural and social factors especially in primary school level. In addition, Al-Wadi (2018) investigated facilitating in-service English teachers' language and teacher trainee's supervision through written feedback in Bahrain. His study examined using an alternative teaching practicum model for a group of in-service English teachers. The project consisted of two cycles, providing two different types of written feedback, written comments, and structured written reports during the supervision process. Through using interviews and questionnaires, teacher candidates found written feedback effective in assisting them to develop specific teaching skills such as reflection, rethinking evaluation and acknowledging continual professional development. Also in Bahrain, Al-Mosawi & Wali (2015) conducted an action research that explored the potential of using mobile applications to support learning and engagement in primary classrooms. They studied the differences between the utilization of mobile applications in a classroom settings in a private school, with more technology exposure, and in a public school with limited technology exposure. The study found that the use of mobile applications in the classrooms increased students' engagement despite differences in the utilization of technology. The study also found that integrating mobile applications in classrooms has the potential to enhance students' overall performance. Warne (2006) published an edited book which looked at action research in English language teaching in the United Arab Emirates and looking at perspectives from teacher education at the Higher College of Technology. The edited book included numerous positional papers and empirical studies authored by academic faculty and undergraduate Bachelor of Education students. Similarly, Gallagher and Bashir-Ali (2007) edited a book focusing on action research and initial teacher education in the United Arab Emirates. In a recent study, Hathorn and Dillon (2018) explored the perceptions of six teachers' experiences with using action research model for professional development within the macro-system of current major education reform in the United Arab Emirates. The study found that more individual support should be given to teachers during the action research process, teachers should be allocated more in-school time to work on classroom-based research and that, where applicable, more academic research materials need to be made available in languages other than English.

Littlewood (2011) explored the outcomes of a final year action research project as part of an initial teacher education program in the United Arab Emirates. She examined the responses of graduate and student teachers to interviews and written prompts within a framework of theoretical benefits of action research and reflective practice, linking theory to practice, transforming teaching strategies; transforming student learning outcomes; developing professionalism and lifelong learning; and raising the status of teachers through empowerment. It was found that students referred to all of these outcomes in their responses, suggesting that classroom-based action research is a valuable component of an initial teaching training program in the United Arab Emirates.

From the previous sections, we can conclude that action research responds to practical and important issues in the lives of people in their own work environments, it engages with people in a collaborative a relationship which encourages dialogue and development. The previous literature indicated that action research can be used as a useful tool in teachers' professional development. The next section gives some examples of how action research can assist educators to promote their professional capacity and how this approach can lead to better students' outcomes.

8. Action Research and School Effectiveness

There are many studies that support the potential benefits of using action research on school effectiveness. For example, Cox, Cox and Vann (2012) examined graduate science teachers' perceptions of action research projects and how their engagement in these projects positively affected their middle school students' learning. The findings of the study indicated that the students benefited in different ways such as spending more time working together, feeling excited about designing their own methods, creating their own problem solving techniques, and having a voice in their learning activities. All these aspects reflected positively on their academic achievement. Another study was conducted by Bersh et al (2012) and it consisted of three action research projects conducted by teachers

who used different ways to improve at-risk students' literacy skills by engaging them in multicultural responsive learning as they were immersed in a literacy-rich curriculum with their students in the classrooms. These activities included supporting literacy development for culturally diverse students through increasing interpersonal relationships and motivation, integrating technology, or using creative poetry. The research findings showed that using action research helped the students to develop their literacy skills e.g. increase in reading comprehension, vocabulary, and grammar application. The students also showed strong sense of self-efficacy and more independence in their learning of English as a second language. Young (2012) presented an action research conducted by a second grade teacher who aimed to increase his students' reading comprehension. The teacher designed 15 comprehension activities and evaluated their effect on his students' reading comprehension test. The results of the study indicated that the students achieved more than expected one-year growth in their reading comprehension.

9. Reflection on the Current Bahraini Context

In this section, the Educational Leadership Program (ELP) is used as an example for applying action research in educational professional development in Bahrain Teachers College (BTC). This college was established in 2008 in line with Bahrain Kingdom's Education Reform initiatives as outlined in Bahrain Vision 2030. The Ministry of Education (MoE) and the National Institute of Education (NIE) in Singapore worked on designing and developing various educational programs in BTC in accordance to the needs of the Kingdom. The college offers the following programs with the support and funding from MoE: (1) Bachelor in Education programs for primary school teachers. (2) Post Graduate Diploma in Education for specialized subject teachers for intermediate and secondary schools. (3) Professional development courses for in-service teachers. (4) Educational leadership program (ELP) for school head of departments and school principals. The strategic plan of BTC emphasizes the importance of conducting research that would contribute to the educational reform agenda for teachers' professional development that includes encouraging teachers and school leaders to take coaching roles and to implement action research. Most of these initiatives are still in progress and open for more development. There is a specific course on action research for the Bachelor students as well as a graduation inquiry-based project for the school principals in the (ELP).

The ELP program consists of 13 professional development modules plus an 'innovative school project' where at the end of the program each participant submits a research project to propose a change program in their school. The project must be school-based and ought to benefit a specific group of students in the school. The project should also demonstrate capacity building of the school in areas of both human and structural aspects. The participants receive supervisory support by assigned BTC faculty members throughout the research process. The participants are expected to construct knowledge from both theory and practice. Looking at the research topics in the executive research projects summaries (Bahrain Teachers College, 2016) and the abstracts of research projects (Bahrain Teachers College, 2019) it seems that most of the research projects focused mainly on descriptive topics rather than action research problems. For example, most of the research titles and abstracts were focusing on similar problems such investigating the perspectives of teachers on the reasons of students' low achievement in certain subjects, or searching for the causes of particular behavioral problems in their schools, or exploring the obstacles which hinder the success of some projects in their educational settings. There were few projects which looked at the effectiveness of particular teaching or assessment strategies or evaluated curricula. The majority of the research projects employed quantitative methodologies and used questionnaires as their main research tools. Only one research symposium was held in 2014 where seven school principals presented their research projects to BTC students and faculty members. Looking at the research projects abstracts and the symposium papers, it seems that action research methodology was not employed to a large extent in the ELP program. In addition, there is a misconception which seems to be widely held by many teachers and school principals that any research held in school can be called action research. Through discussion with five school principals about their experiences in conducting inquiry-based research in the ELP program, the researcher summarized the following views: the major takeaways the school principals have from conducting their research project that they systematically learned more about the strength and weakness in their schools, read and reflect on educational literature more than they used to, and expand their understandings and gained more experiences on specific research methodologies and methods. They also felt that they became more aware of the importance of conducting research to solve school problems and gained better skills to link theory with practice. Some of participants indicated that writing research allowed them to voice their ideas and personal philosophies. The participants pointed out that they learned about themselves in the process of conducting their research projects. For example, they said that conducting research helped them to be more patient as they faced many complexities throughout the research process. They felt more self-confident about their abilities in finding solutions to their school problems and felt the passion for reading and writing more about their educational experiences. Some of the school principals indicated that they learned how to find better

alternatives to traditional professional development by engaging in research and they are planning to encourage other teachers in their schools to conduct research related to the recommendations of the Quality Assurance Authority reviews (i.e. school inspection authority).

In addition, the school principals felt that the process of conducting their research projects are valuable to their careers as it helped them review and analyze the current practices of their schools, improve their reflective skills, produce knowledge in learning communities instead of seeking individualistic ready-made solutions. Furthermore, having clear vision about their schools' situation and looking for innovative ways for improvement, and promoting a culture of respect and engagement for all point of views in their schools. There were a number of difficulties encountered during the research process such as lack of time and difficulties in balancing their school work with research writing, and lack of training in research methods and methodologies. Some of the participants wished to attend or participate in research conferences or publish their papers in educational journals or websites.

10. Conclusion and Implications

To achieve high quality education for all students, the educational system in the Kingdom of Bahrain requires an approach that emphasizes knowledge construction, collaborative learning and creating a knowledge-based society. Improving professional development for school principals is an essential element for achieving this goal. The literature discussed in this paper shows that there are different approaches to educational professional development. This paper highlighted the shift from traditional types of professional development such as, workshops and lectures to a more active, collaborative, job-embedded, reflective and sustainable types of teacher professional development, which include: observation, involvement in reform projects, study groups, mentoring and open lessons. In addition, action research allows teachers to engage in professional development activity that hopefully will allow them to think, reflect, work with others and find systematic answers for the problems and questions they face in their everyday educational practices. Many researchers around the world use action research as a beneficial approach to teacher professional development. There is a growing interest in some GCC countries in action research. However, more efforts are needed to promote action research in schools and teachers' colleges through allowing teachers to have more time and get more resources to conduct action research in their schools. It is also important to raise the awareness of the educators that not any research conducted in schools can be called action research. The BTC and MoE should collaborate in facilitating school-based professional development workshops and joined projects on the area of action research. There is also a need for disseminating teachers' action research projects done through individual initiatives and organize national conferences to encourage educators to exhibit their research outcomes and exchange knowledge in professional learning communities.

References

- Al-Mahdi, O. (2012). Using authentic learning and ethno-mathematics ideas in teaching history to primary pre-service mathematics teachers: A qualitative action research. In G. Zhu (Editor). *Proceedings of the International Conference on Research Challenges in Social and Human Sciences* (p. 43-48). June 12-13, 2012, JeJu-Island, Korea. USA: Information Engineering Research Institute.
- Al-Mosawi, A., & Wali, E. (2015). Exploring the potential of mobile applications to support learning and engagement in elementary classes. *International Journal of Mobile and Blended learning*, 7(2), 33-44. <https://doi.org/10.4018/ijmbl.2015040103>
- Al-Wadi, H. (2018). Facilitating in-service English language teacher trainees' supervision through written feedback: Action research. *International Education Studies*, 11(9), 1-11. <https://doi.org/10.5539/ies.v11n9p1>
- Amin, M., Rashid, & Teh, K. (2019). Investigating issues and challenges in employing action research for teacher training in Malaysian contexts. *International Journal of Education and Practice*, 7(1), 30-40. <https://doi.org/10.18488/journal.61.2019.71.30.40>
- Bahrain Teachers College. (2016). *Executive summaries of the higher diploma of educational leadership participants' innovative school research projects 2014-15*. Bahrain: University of Bahrain Printing Press.
- Bahrain Teachers College. (2019). *Abstracts of research projects for school leaders in the higher diploma in educational leadership*. Bahrain: University of Bahrain Printing Press.
- Battersby, S., & Verdi, B. (2015). The culture of professional learning communities and connection to improve teacher efficacy and support students learning. *Arts Education Policy Review*, 116(1), 22-29. <https://doi.org/10.1080/10632913.2015.970096>
- Bersh, L., Benton, P. & Lewis, A. (2012). Action research for improving at-risk students' literacy skills: The professional development of Florida teachers through their journeys integrating technology, poetry and

- multiculturalism for literacy interventions. *Inquiry in Education*, 2(2), 1-18.
- Bolam, R., & McMahon, A. (2004). Literature, definitions and models: Towards a conceptual map. In C. Day & J. Sachs (Eds.). *International handbook on the continuing professional development of teachers*. Place: McGraw-Hill Education.
- Cary, S. (2011). *A beginner's guide to scientific method (Fourth Edition)*. United Kingdom: Wadsworth Cengage Learning.
- Castanheira, P. (2016). Mentoring for educators' professional learning and development: A meta-analysis of IJMCE volumes 1-4. *International Journal of Mentoring and Coaching in Education*, 5(4), 334-346. <https://doi.org/10.1108/ijmce-10-2015-0030>
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in Education*. London: Routledge. <https://doi.org/10.4324/9781315456539-22>
- Coghlan, D., & Brydon-Miller, M. (2014). *The SAGE Encyclopedia of Action Research*. London: Sage Publications Ltd. <https://doi.org/10.4135/9781446294406>
- Cox, B., Cox, B., & Vann, M. (2012). Using action research to examine teacher strategy effectiveness. *Journal of Learning in Higher Education*, 8(1), 84-89.
- Cunningham, D. (2011). *Improving Teaching with Collaborative Action Research: An ASCD Action Tool*. Alexandria, VA: ASCD.
- Darling-Hammond, L., Hyster, M., & Gardner, M. (2017). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute.
- DuFour, R., Eaker, R., & DuFour, R. (2005). What is a professional learning community? In R. DuFour, R. Eaker, & R. DuFour (Eds). *On common ground* (pp. 31-43). Bloomington, IN: Solution Tree.
- Gaible, E., & Burns, M.(2005). *Using technology to train teachers: Appropriate uses of ICT for teacher professional development in developing countries*. USA: Washington, DC: Information for Development Program.
- Gallagher, K., & Bashir-Ali, K. (2007). *Action research and initial teacher education in the UAE*. UAE: Higher Colleges of Technology.
- Gujarati, J. (2018). Taking action: (Re)imagining professional development through the teacher research project. *Inquiry in Education*, 10(2), 1-19.
- Gusky, T. (2000). *Evaluating professional development*. USA, CA: Crowne.
- Gusky, T. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice*, 8(3), 381-391. <https://doi.org/10.1080/135406002100000512>
- Hanafin, J. (2014). Multiple intelligences, theory, action research, and teacher professional development: The Irish MI project. *Australian Journal of Teacher Education*, 39(4), 126-142. <https://doi.org/10.14221/ajte.2014v39n4.8>
- Hathorn, C., & Dillon, A. (2018). Action research as professional development: Its role in education reform in the United Arab Emirates. *Issues in Educational Research*, 18(1), 99-119.
- Hofman, R., & Dijkstra, B. (2010). Effective teacher professionalism in networks. *Teaching and Teacher Education*, 24(4), 1031-1040. <https://doi.org/10.1016/j.tate.2009.10.046>
- Kyndt, E., Gijbels, D., & Grosemans, I. & Donche, V. (2016). Teachers' everyday professional development: Mapping informal learning activities, antecedents, and learning outcomes. *Review of Educational Research*, 86(4), 1111-1150. <https://doi.org/10.3102/0034654315627864>
- Littlewood, S. (2011). Transforming the practice of student teachers in the UAE through action research. *Education, Business and Society: Contemporary Middle Eastern Issues*, 4(2), 97-105. <https://doi.org/10.1108/17537981111143828>
- Mertler, C., & Hartley, A. (2017). Classroom-based, teacher-led action research as a process for enhancing teaching and learning. *Journal of Educational Leadership in Action*, 4(2). Retrieved September 30, 2019, from <https://www.lindenwood.edu/academics/beyond-the-classroom/publications/journal-of-educational-leadership-in-action/all-issues/previous-issues/volume-4-issue-2/faculty-articles/mertler/>
- Mligo, E. (2016). *Introduction to research methods and report writing: A practical guide to students and*

- researchers in social sciences and the humanities*. UK: Wipf and Stock publishers.
- Morales, M., Abulon, E., Soriano, P., David, A., Hermosisima, V., & Gerundio, M. (2016). Examining teachers' conceptions of and needs on action research. *Issues in Educational Research*, 26(3), 464-489.
- Moyle, K. (2016). *A guide to support coaching and mentoring for school improvement*. Australia: Australian Council for Educational Research.
- Ng, P. (2012). Mentoring and coaching educators in Singapore education system. *International Journal of Mentoring and Coaching in Education*, 1(1), 24-35. <https://doi.org/10.1108/20466851211231602>
- Reason, P., & Bradbury, H. (2001). *SAGE handbook of action research: Participative inquiry and practice*. London: SAGE Publication. <https://doi.org/10.4135/9781848607934>
- Schechter, C. (2008). Organizational learning mechanisms: Its meaning, measures, and implications for school improvement. *Educational Administration Quarterly*, 44(2), 155-186. <https://doi.org/10.1177/0013161x07312189>
- Shanks, J. (2016). Implementing action research and professional learning communities in a professional development school setting to support teacher candidate learning. *School-University Partnership*, 9(1), 45-53.
- Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of Educational Change*, 7, 221-258. <https://doi.org/10.1007/s10833-006-0001-8>
- Vangrieken, K., Dochy, F., Raes, E., & Kyndt, E. (2017). Teacher collaboration: A systematic review. *Educational Research Review*, 15(2015), 17-40. <https://doi.org/10.1016/j.edurev.2015.04.002>
- VanOostveen, R. (2017). Purposeful action research: Reconsidering science and technology teacher professional development. *College Quarterly*, 20(2), 1-40.
- Warne, A. (2006). *Action research in English language teaching in the UAE: Perspectives form teacher education at the higher colleges of technology*. UAE: Higher Colleges of Technology.
- Willis, J., & Edwards, C. (2014a). The twists and turns of action research history. In J. Willis & C. Edwards (Eds.). *Action research: Models, methods, and examples* (pp 3-20). Charlotte, NC: Information Age Publishing.
- Willis, J., & Edwards, C. (2014b). Theoretical foundations for the practice of action research. In J. Willis & C. Edwards (Eds.). *Action research: Models, methods, and examples* (pp. 21-43). Charlotte, NC: Information Age Publishing.
- Willis, J., & Edwards, C. (2014c). Verities of action research. In J. Willis & C. Edwards (Eds.). *Action research: Models, methods, and examples* (pp. 45-84). Charlotte, NC: Information Age Publishing.
- Young, C. (2014). Providing independent reading comprehension strategy practice through workstations. *The Journal of Literacy Education*, 2(1), 24-35.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).