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PEDAGOGY

Unleashing the Powers Within: Delving Into Our Own Talents to Provide Effective CPD

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Abstract

Teaching is a dynamic process and requires teachers to be become lifelong learners who can demonstrate their ability to change their instruction practice in line with educational needs. Continuing professional development (CPD) is the means by which teachers develop the knowledge and skills to enhance their teaching and learning experience of their students. CPD has the potential to provide the tools to enable the smooth implementation of new pedagogical methodologies and subject content. Due to my current geographical location, there were few CPD courses or programs available for me to attend. Through this research, I wanted to complete a self-reflective study, by developing my own knowledge and skills in the area of action research (AR), and to establish if AR was an effective form of CPD. If I successfully concluded that AR was an effective form of CPD, I subsequently wanted to establish if AR could contribute to a lifelong structured program of CPD. As a result of self-reflection and research, I identified AR as a skill that had the potential to satisfy the shortcomings in my own CPD. In collaboration with students and colleagues, an AR study was implemented in the physical education program to bring about enhancements in my teaching strategy. This case study demonstrates that I became a skilled reflective practitioner, and by embedding an AR approach into my teaching strategy, I could provide enhancements in teaching and in the learning experience of students. By developing my

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skills of a practitioner researcher, I could use AR as a means to support and complement my own CPD requirements. AR proved to be a useful form of CPD in physical education. It supported and complemented the role of CPD to give me the opportunity to update my skills and knowledge, to engage in reflection, and to collaborate with students and colleagues. It satisfied my need to implement enhancements in my teaching and in the learning experience of my students. AR appears to support a model of effective CPD that could contribute to a lifelong and sustained program of development for a teacher. But it should only be undertaken in conjunction with a broader structured program of CPD.

Teaching can be considered a dynamic, fluid, and complex process that requires professional integrity, requiring teachers to become "continuous learners" throughout their careers (Armour, 2006). This changing world in which we live requires teachers to be high-level knowledge workers who can constantly expand and adapt their own professional knowledge, as well as that of their profession (Schleicher, 2012). They must be fully engaged in the process of lifelong learning and able to evolve and adapt throughout their career (European Commission, 2004, pp. 2–3). The ability to adapt and implement change must be reflected in changes to classroom practice of the teacher, resulting from a change in their attitudes and beliefs over time, and also a change in the learning outcomes of students (Guskey, 2002). Just as teachers are seen as the pivot around which the educational system operates, teachers are a vital component in implementing change and in reforming the educational system, yet in many cases they are also considered as a major obstacle to change (Prawat, 1992). Not only do they need to be adaptable, but teachers also have a responsibility to extend the boundaries of their professional knowledge through a commitment to reflective practice, through research, and through a systematic engagement in continuous professional development from the beginning to the end of their careers (European Commission, 2010, p. 12). One of the main methods of helping teachers bring about change is through the assistance of continuing professional development (CPD) programs.

Reason for This Research

I have been a qualified physical education (PE) teaching for 28 years. CPD is an integral part of my profession and I have always

endeavored to keep up to date with changes in my profession as a means of enhancing my knowledge and skills. Many CDP courses have not lived up to my expectations and have often been inadequate. In general, there are persistent concerns within our profession about the quality of CPD provision (Schleicher, 2012). Many of these courses that I have attended, specifically in PE, though enjoyable, were often lacking in depth and challenge (Armour & Yelling, 2007). I have resided in Kuwait for 14 years. PE is recognized as an important element in the curriculum but would not be held in the same esteem as the sciences or mathematics or other academic subjects. Coupled with the harsh climatic conditions during most of the year, and the demographic size of the country, the direct provision of PE CPD is not easily available or accessible. As I reflected on the pattern and direction of my own professional development, it has been sporadic and lacking in a clear focus and functional goals. In an effort to rectify this matter, I needed to (i) identify my short- and long-term teaching needs, (ii) identify the best possible strategy to meet these needs (by developing a sustained and effective CPD program), (iii) develop the knowledge and skills to be able to implement my own effective CPD, and (iv) be able to evaluate and plan further programs to meet my own needs over my career as a teacher in a systematic manner.

Without the option to attend externally provided CPD courses, and based on my own assessment of what skills I wanted to develop, I devised a plan to fulfill these needs. I did this by reflecting on my current teaching skills, my current knowledge, and how effective I was as a teacher. I videoed myself teaching and used this data to subjectively observe what teaching and learning was taking place in my lessons. I also reviewed my class notes and spent much more time writing down my observations. Based on this analysis, I established that I want to (1) enhance my skills of reflection and evaluation (de Vries, van de Grift, & Jansen, 2014), (2) develop my knowledge and skills in action research (AR) so that I could bring about enhancements in my teaching and learning, (3) embed this approach into my teaching strategy, and (4) evaluate the success of AR. I became proactive in meeting these needs through my own means. I carried out a literature review in the PE sector to identify how this might be achieved.

Literature Review

Effective CPD

Despite the emergence of research in recent years, it is widely recognized that the organization and delivery of CPD has been flawed and requires greater planning and organization. In fact Borko (2004) described them as being "woefully inadequate" (p. 4). Many teachers stated that often CPD courses were contextually sterile and did not provide the knowledge or support that teachers needed (Armour & Yelling, 2007; Opfer & Pedder, 2010). I endeavored to identify the purpose of CPD and what constituted effective CPD so that I could apply this to my own professional development. Day (1999) described professional development as

> the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purpose of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues throughout each phase of their teaching lives. (p. 4)

Day's (1999) description of CPD, as a dynamic and a lifelong learning process, with the ultimate goal based on providing the best possible learning experience for students to enhance their learning outcome, resonated with me. De Vries, Jansen, and van de Grift (2013) suggested that CPD should include offering teachers opportunities to update their knowledge and skills, engage in reflection, and collaborate with colleagues. The fundamental view is that it should support teachers to develop a set of qualities that will enable them to be innovative, to "review evidence of effective practice, and to engage with current innovation and research in order to keep pace with the evolving knowledge society" (European Commission, 2004, pp. 2–3). In a more practical way, teachers must be able to (a) connect the professional development strategies that they have been instructed upon, to their own students and context, (b) make them relevant and meaningful, (c) support them in attending to the new issues and problems, and (d) understand the issues and translate these new understandings into practice (Prawat,1992; Thompson &

Zeuli, 1999). It is believed that CPD is more likely to be effective in improving teacher's knowledge and skills if it focuses on academic subject matter (content); gives teachers opportunities for "hands-on" work (active learning); and, with a clear link to classroom teaching and learning, is integrated into the daily life of the school (coherence), with an emphasis on continuous, long-term, sustained professional learning, which is collaborative, classroom based, and research informed (Armour & Yelling, 2007; Darling-Hammond & Richardson, 2009; Garet, Porter, Desimone, Birman, & Yoon, 2001; Opfer & Pedder, 2010).

Based upon the perspective identified in the literature, CPD cannot be a random series of one-off courses. It must be part of a systematic, well-structured long-term process that includes regular opportunities and experiences planned systematically to promote growth in the profession, that will bring about successful change in teachers' practice, for school improvement and pupil achievement (Bolam & Weindling, 2006; Wells, 2014).

CPD for Physical Education Teachers

CPD specifically for PE teachers has been similarly flawed. The content of professional development has generally focused primarily on sport-specific courses, and there is little evidence of a systematic sustained program of learning or learning progressions (Armour & Yelling, 2007). Casey and Kirk (2010), in their argument for implementing change within the PE teaching profession, have been critical of their reticence and their procrastination in adapting to change. They believe that the responsibility lies at the feet of the PE teaching body and have stated that PE teachers need to take responsibility for the "evolution of practice" in how the profession teaches this subject. They have supported the concept of collaboration with relevant professionals including researchers and PE departments for facilitating changes and the introduction of new pedagogies (Casey & Kirk, 2010; Goodyear & Casey, 2013). It is widely reported that the numbers of people involved in sport and physical activities are decreasing as these activities compete with emerging technologies and an ever increasing sedentary way of life. PE teachers need to proclaim and educate others about the importance of their subject. PE teachers, however, must change and embrace new teaching strategies that have the potential to enhance teaching and learning in this subject to meet

the modern world so that is not subsumed by it. As has been reported in other areas of the curriculum, Armour, Quennerstedt, Chambers, and Makopoulou (2015) similarly suggested that the core focus of PE CPD should be "practice" itself (i.e., embedded and contextualized), should ensure that learning is dynamic (active and requiring time for reflection), and should be never-ending (continuing).

Action Research and Professional Development

The aim of AR is to explore new ways of doing things, new ways of thinking, and new ways of relating (Kemmis, 2010). It is widely used for professional development and has been successful, particularly in education (Jaipal & Figg, 2011; van Looy & Goegebeur, 2007). Halton (2004), in his study on professional development in Ireland, noted that through doing AR, teachers honed their intuitive skills and developed new ones to communicate their ideas, concepts, and research results in an understandable language and form so that their insights form part of the body of educational knowledge generated through practice. AR has often been termed as practitioner-research/practitioner inquiry. "Practitioner-research" is a practical way of looking at your own work to check that it is as you would like it to be, and has been described as a form of self-reflective practice (Brydon-Miller & Maguire, 2009; McNiff, 2002). Practitioner-researchers believe that the teacher's role extends to being a decision maker, consultant, curriculum developer, analyst, activist, and school leader—as well as contributing to an enhanced understanding of the contexts of educational change (Cochran-Smith & Lytle, 1999). They believe this is an inherent part of the teachers' role. This has emerged as a significant pathway for effective professional learning (Wells, 2014). Teachers' professional learning can be augmented by positioning teachers as practitioner-researchers and professionals who are capable of generating change within their local educational communities (Wells, 2014). It is this emerging role of teachers as "pro-active" in their own professional learning/development and giving credence and value to their own expertise that they develop over time and that is often titled "experience" that led me to reflect on what value I could utilize toward my own development. Casey (2013) concluded that this form of research could offer a means of coping with the systematic demands for CPD, in that it ensures the learners (both the teacher and their students) are the focus of any research. Individuals

who engage in practitioner-research develop their inquiry according to interests that are real to them and that arise from their practices (Clayton et al., 2008). Like effective CPD, AR that "augment[s] existing work conditions appears to support and sustain changes to teaching practice and student learning" (Jaipal & Figg, 2011, p. 71). As a word of caution, Halton (2004) advised that AR was not a way of achieving professional development on the cheap; it was expensive in terms of time and resources, and teachers may need to be persuaded to get involved. Carr and Kemmis (1993) stated that AR helped practitioners to theorize their practice, to revise their theories self-critically in the light of practice, and transform their practice into praxis. I was encouraged and enlightened by the potential support that AR offered to a practicing professional. In using AR, I could be self-critical and could generate educational theories based on my own findings (Cochran-Smith & Lytle, 1999).

Action researchers have described the positive benefits of this method, especially when the process is collaborative and shared across a number of peers and the students involved (Brydon-Miller & Maguire, 2009; Cain, 2011). One of the appealing virtues of this approach is that it enables teachers to tap into their own expertise, strengths, talents, skills, and knowledge and to share with other teachers who have similar interests and needs (Jaipal & Figg, 2011; Koshy, 2010). Many researchers have recommended the use of "active learning" in professional communities where school-based professional learning is ongoing, where it can become sustained and job embedded, and where teachers are actively encouraged to collaborate (Darling-Hammond & Richardson, 2009). In adopting this approach, teachers could safely have their ideas challenged and debated, to ensure that the chosen action is valid and reasonable, and as a result, these professional communities can contribute to professional development while maintaining teachers' professional identities (Altrichter, 2005; Clayton et al., 2008). This concept of active learning involves teachers who can share self-defined common learning/professional interests and can interact and discuss, analyze, and problem solve, and this would result in professional learning (MacPhail, Patton, Parker, & Tannehill, 2014). For this discourse to be effective, teachers must have a shared sense of value, a clear vision, and a shared sense of responsibility through the school

system to fulfill their obligation to teach their students in the best possible learning environment (Bolam, McMahon, Stoll, Thomas, & Wallace, 2005).

Action Research and Physical Education

Much has been written about the need for PE teachers to be more reflective about their practice through AR, yet despite this a dearth of research has been carried out in this area (Casey, Dyson, & Campbell, 2009). Kirk (1993) argued that AR has the potential to bring about educational change that incorporates a concern for more effective teaching and learning, deepening and broadening teachers' understanding of their work and the subject matter and leading to better forms of PE. Lopez-Pastor, Monjas, and Manrique (2011) concluded, from a 15-year study of PE teachers, that AR has the potential to enhance teaching practices, to improve practical knowledge, and teaching for all teachers. A number of curriculum researchers have called upon teachers to work together in a community of practice, supported by university–teacher collaboration to aid in pedagogical change (Goodyear & Casey, 2013). Armour and Yelling (2007) also encouraged PE teachers to use this approach to set the CPD agenda based on their collaborative assessment of their pupils' learning needs. When questioned about this approach, teachers have stated that they enjoy this involvement with their peers in learning with and from professional colleagues in their self-selected professional learning networks or communities (Armour & Yelling, 2007). Lopez-Pastor et al. (2011) found that using AR in a collaborative way provides enormous benefits in developing teacher learning in PE. But change seems to be gradually beginning to take hold, and Gubacs-Collins (2007) noted that the emphasis on AR was increasing in PE.

Research suggests that great benefits may be had from this type of intervention. I wanted to establish if I could reap similar benefits from my teaching and if I could conclude if it constitutes an effective form of CPD. I was encouraged and enlightened by the concept of AR, and the recognition that my years of experience could be useful and recycled for this purpose.

AR is not without its critics, and reservations have been expressed about teacher research. Hancock (2001) identified possible difficulties that teachers might face including a lack of expectations that

teachers should research and write about their professional practice, the demanding nature of teaching that leaves little time and energy for research, the lack of confidence and marginalization of teachers to be able to carry out research, and the mismatch between available research methodologies and teachers' professional ways of working classrooms.

Method

Study Design

The theoretical and conceptual framework underpinning this intervention lay in social-constructivism. Creswell (2009) described social constructivism in terms of individuals seeking an understanding of the world in which they live and work, coupled with the need to develop subjective meaning of this experience. This approach tends to use interviews and observations to allow data from multiple perspectives on an issue to be gathered and examined. Action researchers actively engage in a process of construction from which they abstract and develop meaning from their interpretation of the data collected (Koshy, 2010). This research was a self-reflective case study into my own practice. I decided to engage in this study as a form of CPD, to identify ways to enhance my own practice in a systematic, coherent, and progressive manner (Armour & Yelling, 2007). I drew upon Schön's (1983) "reflection-in and on-action" to guide my incremental changes for enhancement. As a result of this self-reflective study, I wanted to establish if acquiring and implementing the skills necessary for AR was an effective form of CPD and if AR could support a program of structured sustained professional development. This research was part of a larger study that also used AR to measure the impact on student learning during implementation of a peer- and self-assessment strategy in PE. The findings from that aspect are not reported here. This intervention received ethical approval from the ethics committee of Dublin City University.

I adopted a cyclical approach to reviewing my work and reflecting upon it to see if it was as I wanted it to be, based on a cyclical pattern of plan, act, observe, and reflect. I reflected on my practices, planned an action to enhance or alter that practice, implemented that plan, observed the enhancements, and reflected upon the outcome (Koshy, 2010). See Figure 1.

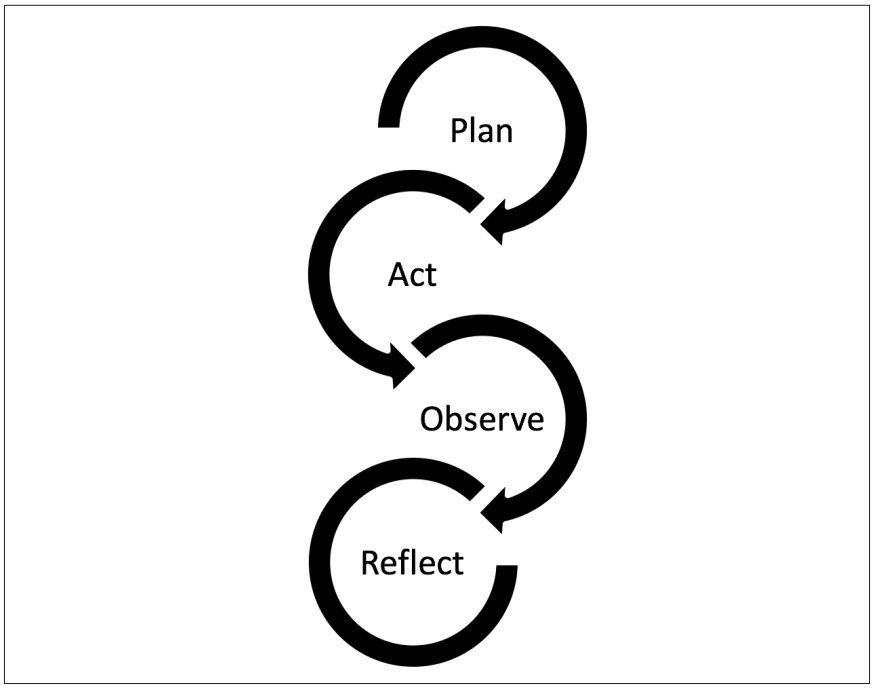

Figure 1. Plan, act, observe, and reflect: Process of action research.

Having reviewed the literature, I established the following basic principles to implement an effective AR project. I drew upon and adopted the following, which were informed by the steps developed by the theorists McNiff (2010), Bassey (1998), and Casbon and Walters (2004). I believed these steps provided a clear chronological order for me to follow. Many steps were overlapping in all three researchers. See Table 1 for the steps I followed.

Table 1
Combined Steps Devised for This Intervention Based on Research

Stage	Steps	Authors
Plan	Review current practice,	McNiff, 2010; Bassey, 1998; Casbon & Walters, 2004
	Identify an area to be improved,	McNiff, 2010; Bassey, 1998; Casbon & Walters, 2004

Table 1 (cont.)

Stage	Steps	Authors
Act	Imagine a way forward,	McNiff, 2010; Bassey, 1998; Casbon & Walters, 2004
	Try it out,	McNiff, 2010; Casbon & Walter, 2004
Observe	Monitor the action	McNiff, 2010; Bassey, 1998; Casbon & Walters, 2004
Reflect	Evaluate its success	McNiff, 2010; Bassey, 1998; Casbon & Walters, 2004
	Continue using the action if it is successful or,	McNiff, 2010; Bassey, 1998
	Try another option if it wasn't,	McNiff, 2010; Bassey, 1998; Casbon & Walters, 2004
	Evaluate the new practice, and	McNiff, 2010; Bassey, 1998; Casbon & Walters, 2004
	Modify the ideas and practices in light of the evaluation.	McNiff, 2010; Bassey, 1998; Casbon & Walters, 2004

These steps are often simplified in the research into plan, act, observe, and reflect (Koshy, 2010). See Figure 1. The cycle of plan, act, observe, and reflect took place on two levels, (1) a macro level, one overarching cycle for the intervention as a whole, and (2) a micro level, in the preparation and completion each week for each lesson.

Macro Level: The Overarching Plan, Act, Observe and Reflect – The Intervention

- Plan the intervention based on the information available
- Act and implement the intervention
- Observe and record as the intervention unfolds
- Reflect and analyze the outcome of the intervention

Micro Level

- Plan the lessons weekly based on the information available
- Act and deliver the lessons
- Observe and record the outcome of the lessons

- Reflect and evaluate the lessons and modify ideas and practices

One overall cycle took place during the intervention and then a cycle took place within each week to plan and implement each lesson based on the outcome from the previous lesson.

Background

The intervention was carried out in a school in the Middle East that offers a British school curriculum from KS1–KS4. I have worked in this school for 10 years. I am currently head of secondary PE. The PE program is similar to any English school in that a wide variety of activities are taught. We use a modular-based approach to delivering our program. There are some cultural sensitivities and climate conditions to consider in relation to what we can offer; generally speaking, our program is not unlike a standard PE program on offer in the United Kingdom. The modules delivered during the 12-week intervention included 2 weeks of athletics, 4 weeks of gymnastics, 4 weeks of volleyball, and 2 weeks of mini-games.

Participants

"I" became the central focus of my inquiry (Whitehead & McNiff, 2006). I had a vision and belief in what I was doing and in what I wanted to achieve. This conviction was an important element that served to enhance the process in my teaching and learning (Bechtel & O'Sullivan, 2007).

I carried out this intervention in collaboration with 17 Year 7 female students aged 11 to 12 years. I selected this group of students from this class because it was smaller than average, but it provided me with a greater opportunity to engage more fully with the students and to watch more closely how the intervention impacted their individual learning over the time, but the group was not too small to be too intense on the students taking part. With the opportunities available and the various data collection tools in operation, the students provided the data in relation to the quality of the teaching and learning throughout the intervention. I also drew upon the support of the three other PE teachers in my department. They became my informal community of practice and provided support in terms of pedagogical discussion. They are all extremely experienced PE

teachers, trained in the United Kingdom with a combined total of 40 years of teaching experience between them.

Data Collection and Analysis

AR uses qualitative analysis and I analyzed the data inductively. I used a wide variety of data collection techniques. I used small group interviews with the students before and after the intervention. I transcribed the data about their understanding, learning experiences of PE and how it was delivered. I recorded my thoughts and observations after each lesson in my field notes. I videotaped elements from each lesson, and after each lesson I objectively reviewed these data. At the end of every lesson, the students completed a Student Weekly Log Book (SWLB), which encouraged them to reflect upon each lesson and answer a standard series of questions. I also noted the outcome of discussions with colleagues in my PE department. These include

- preintervention and postintervention interviews with the students about teaching and learning in PE;
- direct observations;
- video recordings of lessons as objective data for analysis;
- the SWLB, subjective data from students; and
- field notes, my own observations throughout the intervention including weekly evaluations of each lessons and ideas to modify practices.

I used Braun and Clarke's (2006) model of thematic analysis to systematically organize and analyze the data and arrange it into manageable chunks. Each piece of data had three distinct features: (1) identifying the object, (2) source, and (3) feature/theme (e.g., if a piece of data was coded T-V-M, it represented the subject of the data came from the Teacher, the source was from the Videotape, the data theme referred to Modified practice). I searched for meanings within these codes so that I could express what was happening and relate it to the research question. I then grouped these coded pieces of data into various themes, for example, modified practice (M), AR, CPD, teacher as active researcher (T/AR). I separated the themes and identified the themes that related specifically to (1) AR, (2) the

use of AR to enhance my professional development, (3) AR and professional development. See Table 2 for the process.

I used member checks with my colleagues and the students after the intervention. I held a meeting with the participants and I shared the data that I wrote up with the students to ensure my representations were consistent with the intentions of their statements. All students were satisfied that I represented their sentiments accurately. To further enhance the validity and reliability of the findings, I used triangulation of data between my own personal observations after each lesson recorded in my field notes (subjective), the video recordings taken in each lesson (objective), and the opinions and observations of the students and colleagues who were directly and indirectly part of the intervention and recorded and quoted in my field notes.

Table 2

Phases of Thematic Analysis

Phase	Process description
1	Data Familiarization
	Transcribing data, reading and rereading data and noting initial ideas.
2	Initial Code Generation
	Coding interesting features and collating data.
3	Searching Themes
	Collating codes into potential themes.
4	Reviewing Themes
	Checking if themes work, generating a thematic map.
5	Defining and Naming
	Refine the specifics of each theme and the themes overall story, generating clear definitions for themes.
6	Producing the Report
	Final analysis, extract selection relating to research questions and literature.

Note. Adapted "Using Thematic Analysis in Psychology," by V. Braun and V. Clarke, 2006, *Qualitative Research in Psychology, 3*(2), p. 87.

Findings

I wanted to establish if embedding AR into my teaching strategy would constitute effective CPD. This AR, as a form of CPD, was "teacher-led" and became embedded in my teaching. This study was personal to my needs; it was practical and collaborative. From the data analyzed, it was clear that the student learning was enhanced through the use of AR. Clear learning objectives were set, and the students reflected on these at the end of every lesson. They completed the SWLB, or were questioned orally, to record their own learning outcomes, identifying what they achieved in the lesson and what they did to contribute to the learning of others.

In the postintervention interviews, 78% of the students believed that they had learned a lot more as a result of the intervention, while 67% of students said that they would like to be involved in this type of intervention again. The students enjoyed being asked for their opinion and were very articulate in contributing feedback. In the postintervention interview, Student A stated, "I learned teamwork from talking to my partner, she listened to me and took my advice, and every time I told her, she did it better." Student B agreed: "Actually, you can help yourself and your partner, you can learn what mistakes they make, and try and not make the same mistakes. You can help them by doing the right position and then they don't do it the wrong way." The feedback from the SWLB helped me to determine the pace and the content pace of the next lesson. Eleven of the 17 students improved their performance grade by the end of the intervention. Prior to the intervention, only two students had top marks for effort, at the end of the intervention, this had increased to six students. The students were learning more and were more committed in lessons with the new approach of AR. The outcome of CPD is to enhance student learning through the use of AR as a form of CPD; this has been achieved in this regard. As Hunzicker (2011) suggested, "When professional development is supportive, job embedded, instructionally focused, collaborative and ongoing, teachers are more likely to consider it relevant and authentic, which is more likely to result in teacher learning and improved teaching practice" (p. 178). As a teacher, I became much more reflective in my teaching, and this became more embedded as a routine part of my teaching strategy.

I developed a new relationship with my colleagues on a professional level. We informally formed a community of practice. I regularly discussed with them the intervention and what I was trying to achieve. I was pleased with the interest that they demonstrated, and I actively encouraged them by regularly asking their advice. When I discussed with them the issue of reluctant performers in the volleyball module after Week 7, Colleague X suggested that I involve the specific students in leading the warm-up for the lessons and they also advised giving them responsibility for peer assessing within a small group. This new role gave the reluctant student a greater sense of responsibility within the lesson and the student's effort levels increased. My colleagues engaged with the new ideas in the strategy and were keen to discuss the intervention, asking how it was going and offering advice on ways to overcome similar issues. They were also learning and benefiting from our exchanges. This would support the view expressed in the research that CPD is most likely to be effective when teachers engage in collaborative learning with their peers formally and informally within the context of the teaching environment (Armour & Yelling, 2007; Webster-Wright, 2009). On completion of the intervention, I provided a formal CPD to my colleagues to discuss the process and the findings. They were eager to know the findings, and in the feedback they provided, they stated after the in-service that they wanted to know more.

In relation to the impact it had on my teaching strategy, this initial cycle/intervention took place over 12 weeks. The cycle of plan, act, observe, and reflect became embedded in my teaching strategy during this time. Weekly, I reviewed my field notes, the video data collected, and the information from the SWLB to plan the next lesson. This process made me more reflective in my teaching and directed me to be more objective in my appraisal of each lesson. The video evidence gathered during each lesson was the most objective data I collected. This research reinforced the importance of "reflections-in and on-actions" (Schön, 1983) to enhance my practice. This analysis gave me a greater understanding of the teaching and learning in my PE lessons. After Lesson 8, I recorded in my field notes that "this study is helping me to make a concerted effort to focus much more on what I am doing and why I am doing it." I also wrote, "I believe most of the students are more focused in the lessons with definite

and clear objectives to focus upon." From the video evidence, I also saw students who shied away from answering questions and who also slowed their efforts in class when they felt I was not able to see them. To correct this, I become more conscious of my position/location in the lesson, being able to see as many students as possible all the time. I also noted in Week 2 that I needed to slow down a little in giving instructions and to reduce the amount of talk time that I used.

Effective CPD

On a macro level, I have completed a single cycle of plan, act, observe, and reflect. AR advocates that reflection on the outcome of a cycle should provide the direction for the next cycle. It is not a discrete unit of work but a continuous spiral, with one cycle feeding into the next. It supports the view that CPD should be a systematic and lifelong approach throughout a teacher's career. In this way, AR developed my professional disposition and encouraged me to be a continuous learner (Mills, 2011). In line with the expectations of bringing about a change in my practice, I achieved the three main goals of professional learning as outlined by Guskey (2002): (i) I changed my teaching strategy, (ii) I became a far more reflective teacher, and (iii) I changed my beliefs and attitude to the way I teach. I too have grown in confidence in producing this piece of work describing my experience.

AR as a Form CPD

Based on the checklist for effective professional development by Hunzicker (2011), AR ticked all the boxes; it accommodated my level of experience and career stage; it satisfied my individual needs; it became job embedded; it focused on student learning and my own instructional needs; it was collaborative and engaged me physically; cognitively, and emotionally; and it required a commitment over time and is ongoing. Because this intervention took place over 12 weeks, it supports the view that more successful CPD programs tend to be long term and offers follow-up and reflection, beyond the 1-day in-service training often offered (Birman, Desimone, Porter, & Garet, 2000; Guskey, 2002). This research endorses the suggestion by Hunzicker (2011) that the more time teachers engage in professional development, the more likely their teaching practice will improve, and it is most effective if teachers have multiple opportunities to

interact with information and ideas over several months. I believe that the enhancements in my practice will be sustainable as they have become embedded in my practice. As suggested, this AR intervention is not a finite process, but I will embark on another cycle of self-reflective analysis to sustain my commitment to my own CPD.

Conclusion

In the absence of enabling CPD structures, it would be easy for teachers to abandon attempts to engage in sustained and meaningful professional development (Makopoulou & Armour, 2011). But I was determined to pursue CPD of my own making. This AR intervention, as a form of CPD, was successful in empowering me to be think critically about my practice as I endeavored to enhance my teaching and the learning experience of my students. It provided me with the tools to dissect my own classroom-based practice and carry out a research-informed study to address practical issues of concern to me. In this regard, AR had the capacity to transform my practice and support my collaborative practices, as well as to give me professional autonomy (Kennedy, 2014).

The principle of embedding CPD in the environment of the classroom while using current teaching as a starting point is worthy of further investigation and consideration (Rose & Reynolds, 2007). It provided me with the tools to address practical concerns within my own teaching and to seek solutions to enhance my practice and the learning of the students. I acknowledge that for effective CPD the teacher must be positively disposed to enhancing their own professional development. This form of CPD acknowledges the teacher as a learner, where the provision is directed at working *with* the teacher to address the teacher's individual needs; it must be constructive and progressive over the working life of the teacher, and it must take account of the individuality of the teacher (Tannehill et al., 2013).

Practitioner-research offers the opportunity for individual teachers to understand the impact that their teaching has on their students, to gather evidence to support or disclaim, and to take an idea and see what results their teaching achieves (Casey & Kirk, 2010), and that is why it is such a complementary component of CPD. When I now look at the range of CPD on offer, I am more focused and critical on what I want, and I am no longer afraid to take the initiative to "go it alone" and find the solutions myself or engage colleagues in a debate

over my concerns. I would encourage principals and managements to support teachers at school in developing more collaborative and research-informed approaches to developing CPD (Opfer & Pedder, 2010). Darling-Hammond and Richardson (2009) identified the importance of active learning, collaboration, involvement in sustained communities of learning, embedding of learning in teacher practice, the development of collaborative approach, and encompassing individual and collective responsibility for this to become an ongoing process.

If it is to become an effective form of CPD, AR must be carried out by a teacher, it must become embedded in the teacher's daily teaching practice and developed over the career of the individual (Casey, 2013; Clayton et al., 2008). Casey and Dyson (2009) concluded that it would require a strong willingness to change, and it takes perseverance through trial and error to achieve it. PE teachers should take greater steps toward using AR, especially in the achievement of real pedagogical change (Casey & Dyson, 2009).

There were challenges in undertaking this approach. It required an enormous amount of time and patience. Trial and error are its cornerstone. I had to research and plan on my own this intervention, though I shared and discussed issues with my colleagues. I had to ensure that I was applying academic rigor to the methodology and the analysis of the data so that it would stand up to public scrutiny. Clayton et al. (2008) noted that practitioner-research is often undertaken over and above regular demands of work; therefore, it will be restricted to a minority of enthusiasts and converts. Armour and Yelling (2007) stressed that professional development should be developed so that it reduces rather than increases such pressures. In addition, Clayton et al. (2008) issued a warning that establishing practitioner-research as a systematic form of CPD for teachers may be difficult, as governments insist on quantifiable measures of improvement and tend to distrust qualitative research, which AR is grounded in. AR should be a core skill introduced in teacher education courses as it provides teachers with a skill for evaluating their performance and assists teachers in introducing incremental enhancements into their daily practices. But I also think it should be used as part of a broader CPD long-term strategy that combines outside providers, a community of practice to work as a group to provide

CPD. As in other studies, the PE teachers in this study placed a high value on learning collaboratively with and from each other in informal networks or communities (Armour & Yelling, 2007). This is an area that is worth pursuing among a group of like-minded people, especially in the absence of externally provided CPD.

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