Research Article

Physical Education Teachers' Action Research on Teaching Games for Understanding

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Abstract

The aim of the present article is to report on a study undertaken to inquire two physical education (PE) teachers' effort to learn and implement the student-centered pedagogy of the Teaching Games for Understanding (TGfU) approach, by using the Action Research (AR) framework as a research methodology. Two in-service PE teachers, each being responsible for a different class of Grade three and four students, from a primary school in Athens, Greece, participated in the study. During a period of two months, the two teachers used an AR cyclical process of planning, applying, observing and reflecting on the TGfU approach, with the purpose of bringing change in their professional practice and in their students' learning. Data was generated through the use reflective journals, survey questions, document analyses and non-participant observations. An inductive analysis and a constant comparative method (Denzin & Lincoln 1994) were used for data analysis and three major themes emerged: teaching PE with TGfU, student learning within TGfU, and teacher's acting and researching on TGfU. From the results, it was found that AR, although initially a difficult undertaking, is an appropriate framework for enhancing PE teachers' capacity to design non-hierarchical lesson activities that are dedicated to students' understanding and development, as the ones suggested by the TGfU approach.

Keywords: Action research, Teaching Games for Understanding, Physical education

1. Introduction

One of the most pertinent discussions within current Physical Education (PE) literature is the dominance of outdated instructional approaches that are implemented in practice in the form of "do-as-I-do" pedagogies (Grehaigne, Richard & Griffin, 2005). The latter support the notion that the more time practitioners spend on the job, the more they will become skilled at their own professional performance. However, growing evidence suggests that "performance pedagogies" (Penney & Waring, 2000) cannot meet the developmental needs of today's students and initiate those changes needed to improve the quality of PE teaching (Casey, Dyson & Campbell, 2009; Tinning, 2010). On the contrary, PE teachers need to be acquainted with frameworks of action that enable them to both inquire and actualize pedagogical content knowledge that will directly affect purposes, thoughts, and practices (Stolz & Pill, 2016).

The teacher Action Research (AR) framework is a framework of this kind. With the purpose of providing increased understanding and new knowledge about teaching, AR is a cyclical process of learning, developing, acting and critically reflecting on concrete experience. By adopting a teacher-as-researcher stance (Casey, Dyson & Campbell, 2009), the action researcher works openly, collaboratively, and systematically with the purpose of eliciting new interpretations of his/her teaching while initiating change in practice. Through this process the teacher becomes more able to connect with his/her theories of learning, and test the validity of his/her assumptions, either emotional or practical.

Within the fields of PE teaching, AR has been used as a spiral process of teachers' professional development,

aiming at students' motor skill and interpersonal progress (Casey, Dyson & Campbell, 2009), focusing on practices of active and cooperative learning (Dyson & Rubin, 2003), seeking to promote school efficiency, accountability and demonstrable outcomes (Tan, Macdonald & Rossi, 2008), or testing the effectiveness of model-based practice (O' Donovan, MacPhail, & Kirk, 2012). The basic finding of these studies is that effective PE teaching cannot be summarized in blueprints, since students are not a uniform group that shares similar behaviors, learning styles and experiences. Thus, teachers have to use a variety of instructional approaches that will challenge the status quo of PE teaching and promise equal opportunities for every student.

The Teaching Games for Understanding (TGfU) (Bunker & Thorpe, 1982) is an approach of this kind. TGfU offers a student-centered perspective to PE teaching, one that uses structured game-play as a means for enhancing students' coherent and purposeful concept and skill learning. According to its underlying philosophy, students become able to understand and successfully implement lesson principles and strategies, when they gain positive experiences of participation in games or game activities, that are modified appropriately to meet their physical, social and cognitive development (Dania, Bakali, Marathou & Mikeli, 2016).

Up to nowadays, the TGfU approach has proven to have a positive impact on students' motivation for lesson participation and enjoyment (Jones, Marshall & Peters, 2010; Mandigo, Holt, Anderson & Sheppard, 2008), on their ability for knowledge and skill transfer (Contreras Jordan, Garcia Lopez, & Ruiz Perez, 2003) and on their strategic understanding and decision making within a variety of game situations (Blomqvist, Vänttinen & Luhtanen, 2005; Griffin, Dodds, Placek, & Tremino, 2001).

However, the diffusion of such an approach in PE everyday practice is still limited since teachers do not recognize it as a distinctive pedagogical approach, but rather as simply good teaching practice (Pill, 2011). Furthermore, the fact that the TGfU approach brings together several didactic approaches and principles (i.e. the whole-part-whole and the guided discovery approach, the concept of non-linear pedagogy, etc.) makes its appreciation and implementation in practice a difficult undertaking.

Based on the above, the aim of the present paper is to report on a study undertaken to inquire two PE teachers' effort to learn and implement the TGfU approach by using the Action Research (AR) framework as a research methodology. AR was developed as a process of equal collaboration between the two teachers and the first author, who took the Socratic role of the research facilitator and provided encouragement and pedagogical understandings to the triadic relationship.

In the first part of the paper, the authors' understandings of the AR methodology are presented and justifications are given regarding its selection as an appropriate form of educational development. In the second part, the two PE teachers' experiences with their implementation of the TGfU approach over an eight-week intervention program are presented, and connections are given regarding the selection of AR as a means for bringing PE teachers' attention more close to how certain pedagogical norms can guide and inform their practice.

2. Educational Action Research

According to Carr and Kremmis (2005), AR is conceived as a spiral learning process undertaken by practitioners and professionals with the purpose of changing what they do, how they interact with others in their work situations and what meanings they assign both to their practices and their interactions. As a form of experiential learning, AR is a systematic process focused on the learner-researcher and his/her effort to create meaningful situational understandings of facts and instances, that will later inform his/her "epistemologies of practice".

Kemmis and McTaggart (1982) claim that, in order to exploit its full emancipatory potential, AR should lead to a) improvement of practice, b) improvement of the understanding of this practice by its agents, and c) improvement of the context within which AR takes place. This improvement is conceived as an empowerment of the relationship between the teacher and his/her workplace (i.e. students, colleagues, curriculum, school facilities), and as a teacher's move from seeking "fixed learning objectives" to creating thinking students with self-initiated learning expectations. The present case study was an attempt to this direction, aiming to direct participants' attention beyond best pedagogical practices, to issues of genuinely informed PE professional action and knowledge.

3. Methodology

3.1 Participants

Two in-service PE teachers, each being responsible for a different class of Grade three and four students, from a primary school in Athens, Greece, participated in the study. By the time of the research, both participants worked as full-time PE

teachers at the school and had more than ten years of experience in the field. The teachers' participation in the program was initiated by their need to update their pedagogy by engaging in a collaborative relationship with the Laboratory of Sport Pedagogy, of the University of Athens, Greece. The role of the AR facilitator was adopted by the first author, who worked as their professional and feedback partner, and provided support and access to materials that helped the two teachers learn the TGfU approach. The facilitator also engaged with them in discussions about the application of TGfU within the PE curriculum, as well as on personal experiences concerning teachers' efforts to become more self-reflective and critical.

3.2 Intervention

Before the beginning of the AR and during their first meeting with the facilitator, both PE teachers admitted that in recent years they were trying to move away from activity centered curriculums and employ more student-centered and game-based practices. For this purpose, a one-month TGfU theoretical workshop was designed, during which teachers were introduced to relevant pedagogical principles, practiced with microteaching and designing TGfU lesson plans and had the opportunity to study and discuss on audiovisual and written material.

At the end of the workshop and according to the guidelines given by Kemmis and McTaggart (1988), a cyclical AR process was agreed upon by all, to facilitate PE teachers' familiarization with TGfU. The AR cycles involved: a) lesson planning and implementation, b) lesson observation and reflection on learning outcomes and experiences, c) identification of key issues and problem areas that needed to be addressed and resolved, and d) planning of new cycles of lesson organization and instruction, based upon empirical evidence acquired throughout the process.

Under the guidance of the facilitator, the two PE teachers planned in common sixteen invasion-game units by using the TGfU approach. During a period of eight weeks, these units were implemented in each teacher's class as an intervention program, with a frequency of four lessons per week, each lasting 35 or 40 minutes. During this period, the two PE teachers received individualized feedback by the facilitator and had daily opportunities to discuss and collaborate on issues regarding the effectiveness and functionality of the new approach. Any necessary changes in lesson organization or program activities were first discussed and agreed upon by all to safeguard the fidelity of the TGfU approach, while enabling each teacher to tailor it to the needs of his/her classroom context.

3.3 Data Collection

Data was generated through the use of daily PE teacher reflective journals (which were employed as a form of post-teaching reflective analysis), pre-and-post survey questions concerning teachers' expected and experienced TGfU learning outcomes, facilitator notes, and critical observations of selected video recordings of both teachers' practice. Triangulation of data was achieved by using the two PE teachers, the facilitator, and an outside expert as points of reference for data interpretation. The use of multiple data sources together with the triangulation of data provided rigor regarding the research reliability and validity. Particularly, rigor was achieved by the use of inductive data analyses (Denzin & Lincoln 1994), as well as by using AR as a method for providing detailed descriptions, representations and understandings of the present study's events. The constant comparison and analysis of pre-and-post data gave rise to three major themes that are presented in detail in the following paragraphs: a) teaching PE with TGfU, b) student learning within TGfU, and c) teacher's acting and researching on TGfU.

4. Results

4.1 Teaching physical education with Teaching Games for Understanding

Before the beginning of the intervention program, the two PE teachers' evident desire to move away from the traditional direct PE teaching approach, made them eager to implement in practice the game-centered pedagogy of TGfU. They believed that the latter would better suit young students' innate disposition for play and thus increase their motivation to get involved in the learning process. Such an involvement, they reported, would bring positive changes to their students' physical literacy and thus make their lessons more challenging and interesting.

The two teachers' pre-intervention responses to the survey questions were highly informed by their TGfU readings and they often employed scientific language and references to support their claims. The multiple chances they had to experiment on TGfU during the training workshop increased their relevance with the new approach and made them more accountable for their claims. They wrote that:

"…within this approach the teachers act as consultants of student learning…TGfU is an opportunity for reshaping current PE structures to meet recommended physical activity and health related goals…within TGfU students' decision making and knowledge transfer abilities are enhanced and active learning time is promoted…"

However, during the intervention, the two PE teachers made significant efforts to apply TGfU with fidelity in their practice, something which often caused them feelings of nervousness, embarrassment, and uncertainty. From their journal writings, it became evident that they both tried hard to step back from their directive role and give their students' chances to experiment and make meaningful game-decisions on their own. They often reported that:

"…students need more instruction to understand the game and stop cheating…students need more practice since lesson flow is often hindered…students continue to need my feedback on the rules of the game…"

The guided discovery activities that they had to use required continuous teacher concentration and awakening. They mentioned that "…*the outdoor space makes teacher questioning difficult to be heard and answered*…" and "…*there is a need for practice on fundamental technical concepts for all to get accustomed to the new approach*…" Furthermore, their reflections and stance during the intervention showed how difficult it was for all (teachers and students) to adopt their new student-centered roles and quit the comfort of the "do-as-I-do" approach:

"…when games are not tailored to students' needs, lesson progress is hindered…when activities are well scheduled students are disciplined and without attention problems…children are highly affected by their game experiences and change the rules of the game while playing…I had to make continuous remarks…"

At the end of the intervention program, both PE teachers felt a relief for the return to their everyday practices, since the new approach put great demands on them for continuous updating of content and practice. They mentioned that:

"…it is difficult to observe and teach simultaneously classes of 25 students…the heavy school timetable and the poor infrastructure made me sometimes want to give up…I had great expectations from my students which were based on my empirical evaluations of their behavior…more time was needed for the teaching intervention to reach my expected outcomes…".

4.2 Student learning with Teaching Games for Understanding

Despite PE teachers' feelings of tiredness and uncertainty at the end of the intervention, it was clear that they both perceived that TGfU had a positive impact on various motor and socio-cognitive skills, which they expected for their students. Motivation for lesson participation, game understanding and awareness, increased effort and satisfaction even from the lower skilled students, were some of the often-mentioned learning outcomes.

"…we had a good time…children left the school's Halloween party to participate in the lesson…during the intervention my guided discovery questions were answered more easily, even from the younger students…many students take their role very seriously…I see an improvement in their game tactics and abilities…behavior problems are minimized and students have stopped asking me: when will we play the game..."

This discrepancy between their often-perceived teaching ineffectiveness and their admitted positive learning impact of the new approach stemmed primarily from their high developed professionalism and their mutual concern to bring immediate change to their practice. As it was recorded in the facilitator's notes, they were both struggling with their poor PE facilities along with their school's policy for final deliverable products (i.e. parent reports, conference presentations, etc.).

Thus, they many times expressed different views regarding their students' progress, such as:

"…some students do not clearly understand their game roles…many students are very supportive of others…students are still very shy in the game and have skill problems…my students' will to play and participate makes me feel moved…"

Lesson observations along with the journal reflections ensured that learning occurred for all students, even for those with behavior problems or indifferent lesson attitudes, although at the cost of the initially scheduled TGfU process.

4.3   Teachers' acting and researching on Teaching Games for Understanding

Both teachers perceived their involvement in the AR process as beneficial in terms of their professional development and self-directed learning. They often mentioned the need for content evaluation and re-planning based on their observations of student behaviors and skills:

> *"…I made changes to lesson rules and structure based on what I thought was appropriate…changes are needed in certain activities for the lesson to meet its goals…it is difficult to put TGfU in practice as a model, it is more of a teaching approach…some lesson plans are complicated and create nervousness to all, changes are needed…".*

In fact, their sensitization to students' needs, roles and abilities was often evident in their reflection writings:

> *"…within the TGfU approach students realized that everyone has a role in the game, which they can support, each, with their personal style and abilities…students were assigned a protagonist role and took responsibility for their learning…within highly competitive activities some students are frustrated.... age and experience is a determinant for students' tactical progress and understanding…young students have difficulties in understanding off-the-ball movements…"*

Their continuous re-planning and reflecting on lesson goals and activities seemed to have a positive impact on students' skills and progress, a fact that was further supported by other school colleagues. The latter, although skeptical at the beginning, commented on students' positive interactions and minimized behavioral problems at the end of the program:

> *"…a colleague, who did not participate in the program, wanted to know more about the TGfU approach at the end of the intervention…Classroom teachers witnessed my students' progress in terms of their social and affective skills…"*

This fact further enhanced PE teachers' belief that change and updating of practice, although difficult at the beginning, is ultimately a worthwhile and inevitable undertaking for their professional development.

> *"…PE teachers must accept that the implementation of the TGfU approach will bring changes to their pedagogical role, and they will need time to get accustomed with designing and implementing guided-discovery activities…lots of work (especially at the beginning) and a change of teacher attitudes is demanded…through the spiral process of AR I acted and reflected on my understandings and practices with a focus on change and improvement…I personally grew as a teacher and as a professional…"*

5.   Discussion

The present study results shed light on two aspects regarding the norms and standards of effective PE teaching. The first aspect concerns the implementation of the TGfU approach as a game-based pedagogy that challenges the traditional training practice by encouraging all students to participate, learn and understand. The second aspect involves the selection of AR as a research methodology, that is most suitable for effectively meeting and coping with the "messy" requirements of everyday PE practice.

By using an AR framework as a means to adapt their instruction to the premises and principles of the TGfU approach, our two PE teachers realized the difficulty of accommodating their theoretically-driven pedagogical aims to the indeterminate situations of their everyday realities. The constant observation of students' lesson skills and progress helped them realize that students are motivated to participate actively in activities that are carefully adjusted to their needs, interest and level of understanding. As it is reported in relevant projects, that have used TGfU as a means to enact effective PE teaching (Díaz-del-Cueto, Hernández-Álvarez & Castejón, 2010; Light & Fawns, 2003), teachers' move from "teaching with telling" to "teaching with creating the need to know" seems frustrating and unrewarding, especially at the beginning, due to their habitual tendency to expect immediate and observable skill outcomes. According to Usher, Edwards and de Meyrick (2015), it is important for PE teachers to familiarize with various approaches and pedagogical models in order to develop their epistemology of practice and be able to give a principled account of what they are doing and why it is appropriate for their students.

the present case, the AR process allowed the two practitioners to get a meaningful insight of the new approach and experiment with its use in their context. At the expense of their free time or time spent in other curriculum learning objectives, the two teachers experienced the benefits of indirect pupil-managed pedagogies together with the feeling that

change is hard for all: students and teachers. Throughout the AR process, they had to stand back from their previous direct teaching role and recognize that their students' effort to learn through the new approach was equally important with their desire to teach in this way, so no immediate changes could be expected. Student progress was built day by day in not foreseen ways and this depended mainly on their readiness to coordinate with students' performance and adapt lesson norms and goals accordingly.

As Winter (1998) and Casey, Dyson and Campbell (2009) highlight, this is the major benefit and burden of AR, since it is not a "spectator" type of research, but rather an experiential process. Whatever the results, they come from teachers' immersion and deep involvement in the way. It is what Dyson (2001) describes as "getting my hands dirty with theory, research and practice". In the present case, this involvement meant that the two PE teachers had to seek for empirical data (i.e. learning outcomes, student behaviors, teaching effects) that could offer explanations concerning the quality of every participant's experience with the new approach. These explanations would further inform their choices during lesson design and implementation and make them more confident with the new way of teaching, in the course of studying it.

However, the two teachers' eagerness to learn and experiment with TGfU did not keep up with their context's readiness to accept it in its entity. Time and space constraints, large classes of students, extra duty teacher obligations and a lack of practical support, hindered their effort to reach their own predetermined teaching goals. Relevant literature supports the above statement by confirming that teacher struggles with time and/or managerial issues negatively influence their reflection patterns and learning attitudes (Ballard, 2006; Kise, 2006).

However, by the end of the AR process both teachers could trace relationships between instructional purposes, strategies, and practical effects and thus develop their own praxeology (Elliot, 1983) regarding what it is like to teach in a student-centered manner. Somekh and Zeichner (2008) state that this is a major advantage of using AR as a methodology for inquiring on educational practice, and thus should be fully exploited by practitioners. At the end of the program both teachers felt that they had changed pedagogically and developed as practitioners, not only in terms of implementing new teaching approaches but mainly in terms of becoming more sensitized to their students' interests and level of challenge. This was an important outcome considering that teachers' deep involvement with the individual subjectivities of their context is a prerequisite for the enactment of effective teaching practices (O' Sullivan, 2007).

6. Concluding Remarks

Based upon the foundations of social learning theories, AR can broaden the horizon of PE teacher inquiry, supporting growth and change as an ongoing process and not as a surface-level solution to fixed ends (Hopper, 1997). Concerning the implementation of student-centered pedagogies, like TGfU, we believe that AR is an appropriate framework for enhancing teachers' capacity to design lesson activities and predict learning outcomes that are non-hierarchical and dedicated to the learner. Ultimately, the issue is not to present PE teachers with new guidelines or normative standards of educational success. The issue is to help them develop an action-science that they will use to adjust their content knowledge to their subject matter, regardless of any interfering task, performer, or environment constraints.

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