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## RESEARCH FEATURE

# Implementating the Games Concept Approach in Singapore Schools: A Preliminary Report

Report by  
Steven Tan, Steve Wright, Michael McNeill, Joan Fry and Clara Tan

## Introduction

Singapore's vision for meeting economic challenges for a prosperous future is encapsulated in the Ministry of Education's vision of *Thinking Schools, Learning Nation* (TSLN). The concept of TSLN aims to enable students to:

- acquire and understand core thinking skills and processes,
- apply skills in learning, decision making and problem solving situations, and
- develop habits to become critical, creative, and self-regulated thinking learners (CPDD, 1998).

In accordance with the TSLN initiative, the Ministry of Education embarked on a comprehensive Curriculum Review Masterplan (MOE, 1998; Wee, 1997). The most significant impact of this Masterplan on the physical education (PE) curriculum has been the introduction of a revised syllabus and the adoption of a games concept approach to games teaching for all grade levels (CPDD, 1999)

## ***The Games Concept Approach to Teaching Games***

The primary goal of the games concept approach (GCA) is to improve students' game performance. The approach seeks to promote greater interest and enjoyment, better problem solving and decision-making skills, and improved competence of students in both learning and playing games. This is achieved by linking tactics and skills through the appropriate use of skill development and application within the actual game context (Griffin, Mitchell & Oslin, 1997; Turner & Martinek, 1995).

Traditionally in Singapore, games instruction has used a skills-based or technical approach (Rink, 1993). Under this approach, specific game skills and tactics are separately emphasized using controlled drills and practices within a highly structured lesson. Students are then expected to apply and link these skills and tactics in more complex game activity not experienced in earlier lessons.

Two major problems have been identified as resulting from this traditional approach (Thorpe, 1990; Werner, Thorpe & Bunker, 1996). First, transition from isolated skill learning to application in actual games seemed to be difficult for the students. Although the skills might be successfully executed during isolated drill practices, most students' game performance fell below expectation. Basically, students lacked the necessary conceptual (or tactical) understanding and capability for appropriate decision-making in the context of a game (Turner & Martinek, 1995; Werner, Thorpe & Bunker, 1996). Second, students were not usually motivated about skill practices where learning was decontextualised. They often perceived isolated drills as tedious and frustrating. This was because in many isolated skill drills, the relevance of skills to game situations was not immediately obvious to them (Griffin, Mitchell & Oslin, 1997; Werner, Thorpe & Bunker, 1996).

In contrast, the GCA is an exciting and innovative alternative through which students can learn to play games while acquiring transferable games skills. Because the GCA represents a radical shift in focus and methodology, NIE has established a research project to track its implementation in Singapore schools. This paper describes the preliminary findings of this study in the hope that it will provide a better understanding of the challenges and advances in implementing the GCA in schools.

## **Report of NIE Study**

### ***Background***

The 3-year NIE research project is fully funded by the Education Research Fund of the Ministry of Education. The impetus for this project is earlier work by Tan and NIE colleagues (Tan & Tan, 2001; Tan & Wong, 2000), which identified a number of problems associated with PE games teaching. These included: the high expectations of teachers' competencies implicit in the curriculum; the lack of teaching resources, appropriate equipment and facilities; insufficient instructional time, and the new roles predicated for students — all plausible challenges for implementing games curricular innovation in Singapore schools.

This new study is a collaborative effort by the NIE Physical Education and Sports Science (PESS) pedagogy research team, NIE trainee teachers, and MOE's PE practitioners who serve as cooperating teachers (mentors), and their pupils.

### ***Aim of the Project***

The study seeks to enhance the MOE's efforts to cultivate and integrate pedagogical practices and changes in games teaching during initial teacher education, while providing professional development to current teachers. Specifically, the objectives of this study are to:

- determine the facilitation factors and challenges both trainee teachers and school practitioners face in the implementation of the GCA;
- compare pupils' perceptions of games learning experiences from the perspective of both the 'new' GCA, and the more traditional skills approach;
- determine the effectiveness of PESS's pedagogical and activity modules for trainee teachers and mentor teachers to help them in implementing the GCA in their teaching; and
- develop a model of curricular innovation implementation that enhances the continued and consistent use of the GCA in physical education.

### **Method**

The three-year study (2001–2004) requires the voluntary participation of trainee teachers, cooperating teachers and pupils. The cohorts of trainee teachers are from the Diploma in Physical Education (Dip PE) and Postgraduate Diploma in Education (Physical Education) (PGDE-PE) programs. A pilot study involving 11 PGDE-PE (Primary) trainee teachers (July 1999 cohort) during their February 2001 teaching practice was carried out.

The trainee teachers (TTs) recruited had completed a pedagogy module in GCA instruction and two other modules for teaching specific categories of games (i.e., invasion/territorial and net/striking games) in PESS. During the teaching practice period, these participants were requested to teach a GCA unit of work comprising 10 lessons.

The cooperating teachers (CTs) recruited for this pilot study had all served as cooperating teachers (mentors) to the trainee teachers over the teaching practicum. These CTs were monitored during and after the practicum, both in

their own use of the GCA, as well as in their engagement in the professional development of PE teacher colleagues who were not familiar with the GCA. Physical education pupils (PEPs) in the GCA classes of the TTs, as specified above, also participated in this study.

For data collection, specific attention was given to the instructional practices, decision-making, planning criteria and evaluative thinking of trainee teachers and their CTs. The perceptions of PEPs in the GCA lessons were also collected. Multiple data collected included: (a) modules written assignments, (b) written evaluations of modules, (c) GCA units of work, including 10 lesson plans, (d) videos of instructional lessons, (e) interviews with TTs, CTs and PEPs, and (f) questionnaires for PEPs. Preliminary analysis focused on identifying the key issues emerging in the data.

## **Results**

Selected findings from a preliminary study involving the 11 PGDE-PE (Primary) trainee teachers are presented in this paper. They provide important insights into some key issues that have arisen from the implementation of this innovation in teaching and learning. Specifically, this report will focus on four key areas identified in the early stages of data analysis: (a) lesson management (b) sports background, (c) pupils' skill ability, and (d) pupils' motivation.

### ***Lesson Management***

Feedback from the PGDE-PE (Primary) TTs focused on the difficulties experienced in implementing the GCA unit of work during their teaching practice. A game-questions-practice-game structure defines the GCA, and the TTs assumed that for every lesson this structure must be strictly adhered to. Consequently, they either tried to start each lesson with a new game concept, rushing through the sequence to end with another game, or they compromised on the skill development and practice phase. No doubt a major part of the problem stems from their lack of teaching experience and their inability to be flexible in their teaching. Certainly, with 30 to 35 minutes allocated for each PE lesson, it is almost impossible to model the four-component lesson structure thoroughly. For this reason, the TTs felt that the time allocated for PE is too short for effective use of the GCA.

### ***Sports Background***

The results show that trainee teachers' own sports backgrounds were a key factor. Having experienced only skills-based approaches and with limited sports playing

background trainees' ability to structure and modify the game and learning activities according to the PEPs' needs and abilities was limited. Developmentally appropriate activities are crucial in PE, as it is through these that PEPs experience the concepts, learn how to solve them and learn to apply the skills in context. Moreover, TTs also experienced difficulties in constructing and asking questions about what PEPs should do and how they should do it. This also stemmed from their lack of game experience. Questioning needs to proceed from the initial two questions of, "What is the goal of the game?" and "How did you achieve the goal?" How this is done very much depends upon the PEPs' responses. It seemed these TTs were unable to proceed effectively with questions that probed and promoted their PEPs' understanding of the concepts and solutions, especially when pupil responses were unexpected or different from those anticipated.

### ***Pupils' Skill Ability***

Pupils' lack of manipulative skills was also perceived as a stumbling block to the successes of the GCA. In using the GCA, one can substitute one skill for another, but for this PEPs are expected to have some minimum level of ability in throwing, catching, kicking, dribbling and striking by primary 4. PEPs were observed making appropriate decisions about what they needed to do, but the activity still broke down because they lacked the necessary basic skills.

### ***Pupils' Motivation***

Keeping their PEPs motivated throughout the GCA was another challenge reported by the TTs. Towards the middle of the unit, the PEPs generally expressed boredom with the focus activity and wanted to play something else. Accustomed to the unstructured play allowed previously by their unqualified pe teachers, PEPs frequently requested a change of activity.

Surprisingly, and despite all their objections, at the end of the unit the PEPs reported that they had found greater motivation and enjoyment in the GCA lessons, compared with the former skills-based lessons. Furthermore, PEPs indicated that, even though they were uncomfortable having to think things through for themselves, they did actually think and learn more.

## **Discussion**

The results of this preliminary study have important implications for how teacher education pedagogy is structured. Learning, and learning how to implement a new teaching approach are confounded when teachers have to respond to their

students in the teaching situation. Beginning teachers are guided by rules and formats that help them manage and have some control over the instructional process. Developing abilities to make decisions about what, when, and how to implement curriculum appropriately and with confidence takes time and practice.

Over the past two years, the PESS pedagogy faculty has begun to address some of these problems by following a more structured approach in their pedagogy. Hopefully, this revised approach will help trainee teachers to better learning and management of the GCA, thus overcoming some of the problems reported in this preliminary study.

Novice teachers start off practising the GCA with peers acting as students in controlled situations and with adequate equipment and facilities. GCA pedagogy module instructors also model the GCA in their own lessons where appropriate. Lesson plans with sample games, questions, and practice tasks are developed and provided for trainees' use. Later, module-related field experiences in school settings allow trainees to work with school pupils. In such semi-controlled environments, under the supervision of the module instructor, trainees learn to make minor changes to the lesson format as situationally appropriate. In this way, trainees can learn how to be more flexible. This is important because the short PE period requires teachers to be very flexible in implementing the GCA. Not every lesson needs to, or should introduce a game concept, and some lessons can begin with skill development if the concept has already been addressed. Similarly, previously taught concepts need to be revisited and reinforced when new skills are introduced (Tan & Wong, 2001).

At the same time, trainees without extensive sports background are encouraged to develop their game experiences and understanding of concepts and tactics through regular participation in game play at NIE. Through the guidance of instructors, trainees are taught to analyse different game plays to identify appropriate tactics, concepts, and skills. Finally, opportunities for novice teachers to discuss, structure, and critique different game situations with their tactical problems are also provided in the practical games modules.

Schools need to understand that for the GCA to work, students need to acquire the necessary foundational skills. Even though one can, in theory, move from striking with a bat to using a hand or a racket, in practice the student needs first to know how to strike. Those PEPs who possess the basic skills reported that when given the opportunity to use critical thinking skills, they actually enjoyed the lessons and were better encouraged to make their own decisions.

Since writing this report, a further set of data has been collected from TTs trained under the training scheme outline above, but the results have yet to be analysed. It is hoped that the findings will provide further insights into the success of this structure, so that more changes can be made, if necessary. Like the trainee teachers, PESS faculty are also learning their own pedagogy for helping these teachers learn and implement the GCA effectively in schools.

## Conclusion

Implementation of the GCA for the teaching of games in schools was expected to begin in 2000. However, there is little evidence to suggest that practitioners in either primary or secondary schools have actually implemented the new approach.<sup>8</sup> Despite all the challenges, the PESS faculty is committed to improving their pedagogy for helping practitioners learn and use the approach in an enduring and consistent manner.

The primary purpose of the PE programme is to promote lifelong participation in sports and physical activity. The PESS pedagogy research team believes that the GCA enables students to understand games better, to play more effectively, and to value and take delight in their learning. The GCA meets all the developmental needs of students for successful game play by providing for appropriate tactical understanding and skills. It is hoped that with this approach, practitioners can develop in their students an interest in sports, such that when they become adults, these individuals will have the improved ability and desire for continued participation.

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