

Global perspectives and developments in game-based approaches: Enhancing the games teaching practices of educators and coaches

— Schedule + Abstracts —

Pre-conference

Teaching Games for Understanding Special Interest Group (SIG)

Santiago de Chile

Tuesday 4th July (10am-3pm)



SCHEDULE

Time	Action	
09:00	Participants and presenters meet at Abba Hotel Presidente	
09:15	Transfer by shuttle bus to Campus San Joaquín (Benito Rebolledo 2054, Macul, Región Metropolitana)	
10:00	WELCOME Chair TGfU SIG and pre-conference chair: <i>Jeroen Koekoek</i>	
10:10	ORAL PRESENTATION A global litmus test of games-based teaching and coaching <i>Aspasia Dania, Jeroen Koekoek, Linda Griffin, Ellen Gambles, Shane Pill, Naoki Suzuki, Nahuel Varela, Stefan König, Philip Kearney, Francesco Sgrò, Han Joo Lee, Claudio Farias, José L. Arias-Estero</i>	
10:30 – 11:20	PRACTICAL SESSION 1A	PRACTICAL SESSION 1B
	Teaching team handball focused on a collaborative-inclusive game play orientation: strategies for bridging the theory-practice gap <i>Luisa Estriga, Amândio Graça, & Paula Batista</i>	Game insight: Designing and teaching inclusive sport games <i>Gwen Weeldenburg & Menno Slingerland</i>
11:30 – 12:20	PRACTICAL SESSION 2A	PRACTICAL SESSION 2B
	Designing rich learning environments in (handball-like) games using game balance analysis and gameplay types <i>Wytse Walinga</i>	Developing students' understanding/ability to play the game while adapting it to attend their needs <i>André Moura</i>
12:30	LUNCH BREAK	
13:30 – 14:00	ORAL PRESENTATION Does the use of futsal balls enhance the quality of play in school football? <i>Christopher Heim & Ulrich Frick</i>	
14:00 – 14:50	PRACTICAL SESSION 3A	PRACTICAL SESSION 3B
	Design like an Egyptian <i>Mauro André</i>	Practical AfL tools and strategies to enhance teaching and learning through games based approach <i>Louis Ho & Lena Chng Sheok Hui</i>
15:00	END OF PRE-CONFERENCE Transfer by shuttle bus back to Abba Hotel Presidente	

ORAL PRESENTATION

A global litmus test of games-based teaching and coaching

Aspasia Dania¹, Jeroen Koekoek, Linda Griffin³, Ellen Gambles⁴, Shane Pill⁵, Naoki Suzuki⁶, Nahuel Varela⁷, Stefan König⁸, Philip Kearney⁹, Francesco Sgrò¹⁰, Han Joo Lee¹¹, Claudio Farias¹², José L. Arias-Estero¹³

¹National and Kapodistrian University of Athens Greece, ²Windesheim University of Applied Sciences Netherlands, ³University of Massachusetts Amherst USA, ⁴University of Sunderland UK, ⁵Flinders University, Adelaide, Australia, ⁶Tokyo Gakugei University Japan, ⁷National University of La Matanza Argentina, ⁸University of Education Germany, ⁹University of Limerick Ireland, ¹⁰University of Enna "Kore" Italy, ¹¹Yonsei University South Korea, ¹²University of Porto Portugal, ¹³Universidad de Murcia, Spain

Game Based Approaches (GBA) are widely recognized as student-centered and inquiry-based approaches to games teaching and coaching that can promote individual engagement and team learning. As approaches that sit upon constructivist epistemologies, GBAs promote holistic learning by emphasizing learner reflection, complexity thinking and social interaction. Since the first publication on Teaching Games for Understanding (TGfU) by Bunker and Thorpe (1982), a growing number of GBA variations have been suggested, sharing similar ideas about game teaching and coaching. However, until today researchers find the implementation of GBAs more challenging than what they would expect. Based on this assertion, the aim of this pilot study was to explore the extent of the use of GBAs in different countries across the world,

After a call from the TGfU SIG Executive Board, twelve GBA experts, and members of the TGfU SIG International Advisory Board (IAB), participated in the study. Each expert was representing a different country (Argentina, Australia, Germany, Greece, Ireland, Italy, Japan, Korea, Netherlands, Portugal, Spain, USA). Participants were asked to complete a self-reflective SWOT analysis (strengths, weaknesses, opportunities, and threats), to examine key structural and contextual aspects of GBA. Participants were free to identify the topics that they thought were inherent in their country-specific applications of GBAs (e.g., PE teaching, sport coaching, teacher/coach education and professional development), and critically reflect on them afterwards. Data were cross analyzed based on the debriefing of the commonalities that were identified across the different topics. A thematic analysis was used to construct themes that would represent a common view of participants' entries per SWOT component.

Results indicated that experts approached the SWOT analysis in a similar manner, focusing on topics such as PE teaching and sport coaching, tertiary courses, and professional development programs. The thematic analysis indicated the following themes per SWOT component: academic recognition and pedagogical value (Strengths), theory-practice disconnections and surface pedagogies (Weaknesses), community advocacy and professional networking (Opportunities), narrow mindedness and rigid mentalities (Threats).

Results support findings raised in previous research examining the development and dissemination of GBAs. Using Bourdieu's concepts of *field* (GBAs as a discrete field), and *doxa* (shared opinions and beliefs that bind experts together) as a heuristic to interpret our findings, we understand that our participants' perceptions of the value and logic of GBAs was obtained more through their shared academic affiliation with GBAs and less via their espoused GBA variant. We thus advocate for the



adoption of a shared framework to GBA use, as modified game-practice that sets the base for developing thoughtful, creative, intelligent, and skillful players.

Keywords: physical education, sport, game-based learning, doxa



PRACTICAL SESSION 1A

Teaching team handball focused on a collaborative-inclusive game play orientation: strategies for bridging the theory-practice gap.

Luisa Estriga, Amândio Graça, Paula Batista

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Driven by game-based approaches, the overall goal of this practice session is to focus on how to teach and coach handball beginners by offering collaborative-inclusive playful opportunities to all, to foster game thinkers, knowledgeable about the game principles, key tactical concepts and behaviours. In the first part, we will briefly introduce the essence of team handball and how this game can be a powerful and valuable tool for practitioners to teach invasion game principles and to create rich learning environments for active participation, inclusion, and a sense of belonging. A roadmap for teaching the handball game will be presented, framed on the game phases and tactical structures that allow shaping the game problems in a gradual and challenging way (Estriga, 2019). In this approach, interlinked and progressive basic game forms (core games) extracted from the game will be presented as essential pedagogical tools to create challenging scenarios of play, fitting learning opportunities and game skills development. Practical examples extracted from the video-recorded scenarios of play will be presented to illustrate the impact of different game forms (including rules or action constraints) in the play flow and emergent (inter)actions that will be motive of debate between the session attendees. Novice teachers and coaches often strive to decide where to start, how to diagnose the game level, how to deliberately modify the game to ensure game play quality, balanced confrontation (between teams and attack: defence) and how to help student-players to find appropriate tactical solutions (making choices and finding solutions for the problems). Therefore, in the second part, the topics will include: (1) how to diagnose the game level by using a conceptual game analysis, (2) how to select or deliberately change/shape a game form according to players ability, response and learning (on-going process); (3) key instructional strategies to deal with students' diversity and to foster game play inclusion, (4) how to design significant learning tasks (partial game forms and game-like tasks) based on emergent game problems and when/how to introduce task changes (simplifications/complexifications) and variety. Participants will be given the opportunity to experience the practice proposals or to observe and discuss how to introduce "novice student-players" to handball and set up reach learning opportunities if a group of children/youngsters is available.

Project funded by the Foundation for Science and Technology with the reference: 2022.09013.PTDC: Empowering pre-service teachers as practitioner researchers toward PE inclusive practices.

Reference

Estriga, L. (2019). Team Handball: Teaching and Learning Step-by-Step. An instructional Guide. In Luisa Estriga (Ed.). Kindle Direct Publishing.

PRACTICAL SESSION 1B

Game insight: Designing and teaching inclusive sport games

Gwen Weeldenburg^{1,2} & Menno Slingerland¹

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2 Eindhoven University of Technology, Eindhoven, The Netherlands

Creating a learning environment in which all players can gain positive experiences, improve their game skills, and deepen their understanding of game tactics and strategies, is a complex task (Lebed, 2022). Especially given the considerable heterogeneity in the psychomotor, cognitive, and affective skills of students within physical education (PE) classes, there is a constant need for differentiation and modification of games to meet the abilities of individual players. Therefore, based on the philosophy and principles of the Teaching Games for Understanding concept (Bunker & Thorpe, 1982) and other game-based approaches (e.g., Tactical Games model and Game Sense approach), the Game Insight approach (Weeldenburg et al., 2016; 2020) was developed with an emphasis on acknowledging and addressing differences between players. To enhance players' motivation and learning, it is crucial to confront them with challenging, yet achievable learning tasks in which they perceive a sense of effectiveness (Ryan & Deci, 2017). Therefore, the Game Insight approach uses the metaphor of the green, blue, red, and black ski slopes to provide PE teachers with a framework that supports them in designing and teaching meaningful game activities in which the players' differing abilities and needs are met. In this session we will introduce and apply this game slope concept in practice.

References

- Lebed, F. (2022). Complexity in Games Teaching and Coaching: A Multi-Disciplinary Perspective (1st ed.). Routledge.
- Bunker, D., & Thorpe, R. (1982). A model for teaching games in secondary schools. *Bulletin of Physical Education*, 18, 5-8.
- Weeldenburg, G., Zondag, E., & De Kok, F. (2016; 2020). Spelinzicht: Een speler- en spelgecentreerde didactiek van spelsporten [Game Insight: A learner- and game-centred approach to teaching games]. Jan Luiting Fonds.
- Ryan, R.M., & Deci, E.L. (2017). Self-determination theory: Basic psychological needs in motivation, development, and wellness. Guilford Press.

PRACTICAL SESSION 2A

Designing rich learning environments in (handball-like) games using game balance analysis and gameplay types

Wytse Walinga

Windesheim University of Applied Sciences, Zwolle, the Netherlands

In a game based approach modified games are at the heart of a teachers practice. Teachers aim for representative designs and search for exaggeration of tactical problems. Whether a game is representative and whether these tactical problems are indeed experienced by players depends on how they are able to play within the central purpose of the game (i.e., the game principle). The game principle is the most basic challenge of a game allowing it to be categorized into e.g. invasion games or net and wall games. Meaningful games teaching centres the game principle at all times and monitors it for guidance of interventions (Koekoek, Dokman & Walinga, 2023). In this practical sessions participants experience how this is done with the pedagogical tool *game balance analysis* (digital application for Ipad) and subsequent gameplay types (Walinga & Koekoek, 2023). A digital application used in Dutch Physical Education Teacher Education (PETE) is used to structure decisions of the teachers regarding observed gameplay.

During the practical session small sided handball games are designed by information of the balance in gameplay. Decisions like whether to modify or keep the current game, which phase of the game needs attention, what game-parameters to adjust when necessary, what tactical input players should get are discussed in practice. According to the practice of teaching this is done from a global to detailed analysis. Additionally the session shows how digital video feedback (*Videocatch for iPad*) might be of interest in the detailed stages of teaching.

References

Koekoek, J., Dokman, I., & Walinga, W. (2023). *Game-based Pedagogy in Physical Education and Sports: Designing Rich Learning Environments*. Taylor & Francis.

Walinga, W., & Koekoek, J. (2023). Game Balance Analysis: A Pedagogical Approach for Designing Rich Learning Environments. In Pill et al., *Teaching Games and Sport for Understanding*. Routledge.

PRACTICAL SESSION 2B

Developing students' understanding/ability to play the game while adapting it to attend their needs

André Moura

Teaching Games for Understanding is a curricular model that teaches students how to play the game, by involving them in adapted game situations that attend their needs, and help their understanding of, decision-making in, and appreciation of, game situations. Considering the final aim is to assess how students play the game, students should be assessed in game situations at the start, throughout, and at the end of their teaching-learning process. For that reason, the inclusion of instructional alignment can be helpful to align curriculum, pedagogy and assessment. Assessment criteria should be based on decision-making rather than technical ability and these criteria should be used throughout the lessons as constructive feedback. For example, using some criteria like 'Passes the ball to the free player (no defenders nearby)' rather than 'pass the ball with the inside part of the foot'. To assess students' level, the focus should be on assess students' ability to play the game, questioning for example, what are the main problems on the game? Are the teams able to score? Can the teams prevent others from scoring? Regarding these last two questions, it is important to understand in which moment students struggle, e.g. when attacking, the problem is in 'Building offensive actions? Creating situations to finish? Finishing? When defending, the problem is 'Preventing the construction of offensive actions? Stopping situations to finish? Stopping finish/defend?' To allow students to play game situations, the game needs to be adapted, e.g. no tackles allowed, get 6 passes, numerical superiority, gets extra points or goals. Back and forth between game and adapted game situations is necessary, and small sided games (even as final assessment, e.g. 4vs4) are recommended to allow students more chances to play. Students should be questioned and have opportunities to assess their ability to play (based on the assessment criteria).

ORAL PRESENTATION

Does the use of futsal balls enhance the quality of play in school football?

Christopher Heim & Ulrich Frick
Goethe University Frankfurt, Germany

Despite being one of the most popular sports in the world, football is also one of the most difficult games to teach in physical education, with reasons - among others - lying in the widely different experience of learners and the difficulty of running and simultaneously controlling the ball with the foot. In Germany, school football is usually taught indoors, resulting in the ball bouncing a lot more than it does on a grass field and thus making it even more difficult to control the ball, particularly for beginners. However, ball control is essential for any further actions such as passing, dribbling, or shooting. Therefore, the study's objective was to evaluate the effects of utilizing low-bouncing futsal balls during physical education lessons in comparison with leather and indoor (felt) footballs. Technical skills and playing performance of 423 5th-grade pupils (197 female; Mage $\frac{1}{4}$ 10 years, 11.5 months) were assessed in isolated trials (time taken to perform a certain task) as well as during 5-a-side matches (quantitative video analysis). The results indicate that utilizing futsal balls is associated with improvements in almost all areas of assessment. In particular, control of bouncing balls is significantly faster with futsal balls than with either leather or felt footballs. In play, using a futsal ball results not only in an increase in effective playtime and the number of ball contacts per player, but also in an improvement in the quality of offensive play (e.g., percentage of successful passes). Interestingly, we also found similar results in competitive high-level youth football players. In conjunction, these findings indicate that the quality of play can be greatly enhanced by using a futsal ball instead of a leather or felt football when playing or teaching football indoor with young people.

PRACTICAL SESSION 3A

Design like an Egyptian

Dr. Mauro André - Western Michigan University, USA

A number of Games-Based Approach (GBA) teaching methodologies have been created since the emergence of Teaching Games for Understanding (Bunker & Thorpe, 1982), to name a few, the Tactical Approach (Mitchell et al., 2020), Game Sense (Light, 2013), Constraints-Based Approach (Davids, 2010). Despite its own particularities, GBAs seem to have a couple of principles aligned: 1) use small-sided games for teaching; 2) use situated learning to enhance problem solving and critical thinking while teaching tactics/strategies and/or skills. Along with these principles, textbooks (aforementioned) have provided scholars and teachers with ideas of small-sided games and situated learning drills that teachers and coaches may use in their daily classes.

Prescribing a finished solution to teach any given game and/or sport may hinder teachers to define content knowledge and precise level of tactical complexity and/or skill level in which their students' need/wish to learn. Hence, in order to empower teachers within their use of GBAs, teachers must learn about game design, so they can design their own small-sided games and/or contextualized drills in a format that is tailored made for their own students.

Games may be defined and categorized in many different forms based on different theories and contexts. For the purpose of this workshop, Ellis (1986) games' structure is used to teach one possible format of approaching game design. According to Ellis (1986) all games must have three elements: (I) rules (and etiquette), (II) skills and (III) strategies (or tactics). Designing a game that are ought to be created with the purpose of teaching a specific learning objective should have the same principle of building an Egyptian pyramid; that is, establish a large base and a smaller top. In other words, while designing a game/activity, a teacher will establish the top of the pyramid (having one of the three possibilities: rules, skills or strategies) as their learning objective and create a large based, i.e., with enough content knowledge and/or ability to perform with the other two remaining possibilities (rules, skills or strategies).

The proposed workshop would introduce examples on how this process take place and give participants the opportunity to try their own ideas and evaluate its effectiveness. It is important to acknowledge that the presenter would like to take this opportunity to collect data on participants impressions (for research purposes) of this format of game design. Participation would be completely voluntary.



PRACTICAL SESSION 3B

Practical AfL tools and strategies to enhance teaching and learning through Games based approach

Mr Louis Ho, Teaching Fellow

Lena Chng Sheok Hui (Dr), Teaching Fellow

Physical Education Sports Science (PESS), National Institute of Education (NIE), Singapore

Preparing our students to be lifelong learners has been the key emphasis of the Ministry of Education, Singapore. The role of Physical Education (PE) has to evolve so that we can prepare our students to be learners for life through sports and physical activities. Game-based approaches offer an exciting opportunity for students to be engaged in active and authentic learning experiences in sports, however, assessment remains a critical component of effective teaching and learning.

To ensure that PE remains relevant in enabling our students to develop the skills and competencies to be independent learners, students are required to be involved in the assessment process. Educators should prioritize the development of assessment literacy among their students. Therefore, equipping them with the skills to be independent learners is an essential planning consideration when designing assessment tasks in PE lessons.

What does it mean for a PE Teacher to be assessment literate? To be assessment literate is to have necessary knowledge, skills and dispositions regarding the full array of assessment processes that will both monitor and promote our student's mastery of the learning expectations. (Toh, P. G., & Leong, S. C. (2016).

This presentation outlines practical strategies for integrating assessment literacy into game-based approaches, including collaborative assessment activities and self-assessment tools. We will share our approach in designing and delivering lessons that nurture self-directed learners (SDL) through practical strategies and tools underpinned by assessment and feedback literacy. Participants will be able to experience assessment strategies and tools designed for Singapore schools that encourage students to play a more active role in their learning.

Observations include higher student engagement, positive and inclusive classroom culture and thinking players who deliberate on their actions, behaviour and choices. We will also share the opportunities, challenges and recommendations for future consideration as the work in making assessment effective and engaging for a game-based approach continues.