

# Learning to use the Teaching Games for Understanding Model with Children who have Special Needs

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## Abstract

The aim of this case study research was to examine how one experienced PE Lead Teacher in a specialist special school for children with social, emotional, and mental health issues learned how to implement the teaching games for understanding (TGfU) model into a unit of hockey lessons. The qualitative data collection methods consisted of two main methods, firstly there was the end of unit semi-structured interview of the PE Lead and secondly there were the Likert Scale student questionnaires which were completed on three occasions, before during and after the study covering sixteen hockey lessons over a four-month period. Using inductive data analysis indicated the experienced PE Lead was able to teach the principles of the TGfU model through a series of benchmarks which has been developed from the original model created by Bunker and Thorpe (1982) and further developed by Metzler (2011). The study has been able to show that the experienced PE Lead has been able to learn how to use the model through his own research and interest in the TGfU approach to learning and apply this to his PE lessons with students who have special needs. The findings have also shown that by using each of the TGfU model benchmarks the engagement, social behaviours and interest levels of the students have also improved. However, the study is limited to one model of learning (TGfU) and is focussed on a single experienced teacher of PE over a relatively short period of time.

**Keywords:** Teaching Games for Understanding, Special Needs, Physical Education, Learning, Hockey, Experienced Teacher.

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## INTRODUCTION

Bunker and Thorpe (1982) proposed that teaching games in physical education (PE) should be directed by the rules of the game and that the learning was linked to an appreciation of the tactical structures. The teaching games for understanding (TGfU) model has since been one of the most widely researched, instructional pedagogical games-based models of recent years (Curtner-Smith 2009). Kirk (2010), Light (2013) and Casey (2014) all highlighted that a teacher-researcher will find there to be an excessive amount of information freely available online to read and learn informally about the TGfU model. However, a significant number of these studies were undertaken in lab-based environments and to date none have taken place in a special school setting such as Bechtel & O'Sullivan (2007) and Pill (2011). Both authors expressed the concern that using an instructional model to teach PE was only for the most advanced teachers and that very few teachers had adopted a models-based

approach because it was too complicated and difficult to implement.

Furthermore, there were no empirical studies which had focussed on the experience of a teacher in a special school environment; and it was the intention of the teacher-researcher to make this the starting point for the implementation of this study. For this reason, it is the aim of the research in this study to identify the reasons or factors which facilitated the learning of the TGfU model by an experienced teacher-researcher. O'Leary (2014) studied how a newly qualified teacher informally learned how to use the TGfU model, but this was based in a mainstream setting and in contrast this study took place in a school where all of the students had special needs and specifically social, emotional and mental health issues (SEMH). The teacher in this study has a sound pedagogical knowledge and understanding of the principles of the TGfU model but wanted to learn about where this

knowledge had been acquired from to be able to share some of this learning with other PE professionals.

This would concur with the original beliefs of the Bunker and Thorpe (1982) who created this model for other practitioners and not for academic purposes. There have been several academic studies such as (Stolz and Pill, 2014) and Lauder (2001) who have welcomed this approach to teaching games through an instructional based model as they all seem to agree that there is a benefit to teaching games in this way as it can show an improvement in student learning and lifelong participation in physical activity. But Jones and Cope (2011) have argued that the use of the TGfU model among UK PE teachers has remained low and limited and there are no other UK studies which have looked at the impact on learning with students who have special needs. This could be because the model is difficult to implement and as a result of this there has been some research into how teachers have needed to modify and adapt the model to suit their environment (Rossi et al, 2007 and Curtner-Smith (2008).

Metzler (2011) devised a set of benchmarks for the TGfU model, and these benchmarks were further refined by Goodyear *et al.*, (2016) to an extent where the benchmarks became known as the *practice architecture*. The TGfU model a six-stage instructional learning process which starts with a game forming stage where the teacher teaches the students through a modified game where the rules of the game are designed to improve the physical, social, and mental development of the learners (Wilkins 2014). The second stage of the model is called game appreciation, and this is the stage that enables the learners to develop an appreciation of the rules that shape the game and will create a sense of fairness and respect between students (Oliver & Neves, 2017). Next is the tactical awareness stage which is taught whilst playing the modified game. The teacher guides the learners to realise a tactical awareness of how to play the modified game to gain an advantage over his or her opponent.

The fourth stage is the decision-making stage where the learners, with some tactical awareness, start to make decisions about “what to do?” and “how to do it?” and therefore making the game more enjoyable (Alison & Thorpe, 1997). The fifth part of the model is the skill execution step where the students learn to execute the required skills from the context of the game and within their ability levels and limitations. Finally, the performance stage is where what is learned is measured against a set of criteria and in this is generally an end of unit assessment such as a core task. (Hopper & Kruisselbrink, 2001). According to O’Leary (2016) what has been described above is known as the *full version* of the TGfU model and there are other less clear versions which have been developed by teachers using a ‘*a la carte*’ approach incorporating a few parts of the practice architecture such as the use of open-ended

questions and the setting of problems to overcome. All the aspects above have been summarised in Table 1.

However, it has been widely reported that most teachers do not follow the steps of the model, and this is mainly because of their lack of understanding each stage of the model (Butler, 1996). There could be several reasons for this, and this is where the study problem originates from. The teacher-researcher wants to determine if a teacher can learn to implement the model within their own school or whether they will be better served attending an external training course with the support from an ‘expert’ to improve their subject knowledge. It is acknowledged that some teachers will have a better starting point than others as they will have been taught some of the principles of the model during their formal teacher training period.

Whereas other colleagues might not have been given this training and their starting point could be very different and be much more limited Brooker *et al.*, (2000). If a teacher has been given external support while attending university, they could have been helped to close the gap on any weaker areas within the TGfU model. Casey (2014) argued that any teacher learning how to use the TGfU model within their own school context would almost certainly improve the effectiveness of the approach’s adoption.

## MATERIAL AND METHODS

The study site is an 11-16 Special School in the UK with a total school population of 140 students. During the investigation many of the students were eligible for free school meals (65%) and all of the students had an education and health care plan (EHCP). The research was carried out over a four-month period and the participating teacher is also the author of this study and will be known for the rest of the study as the teacher-researcher. The school was part of an academy trust, and the school was mainly dominated by a male population of over 120 male students. All of the students at the school had a range of issues including but not limited to ADHD, Autism and Behavioural Difficulties. All of the students in this study were boys and there was one student who was not White British. The lessons were supported by the same member of support staff who was the additional adult in the room for all of the lessons in this study.

At the time of the study the teacher-researcher was a 41-year-old male PE teacher who has been teaching since 2004. The teacher-researcher was the PE Lead at the school, and he was also responsible for a number of other roles within the school, but his passion was for PE and this is what he had always taught since he first qualified in 2004. The teacher-researcher had a full-time teaching timetable and shared the teaching of PE with a number of other colleagues from across school who taught some PE as part of their role teaching other subjects. It was the role of the PE lead to

ensure that the quality of PE teaching was high and that the students were making progress. For the purpose of this study, it was only the lessons of the PE Lead who were involved in the research.

Two groups of year eight students were going to be observed during the study and they were going to be following a Hockey unit of work. All of the students were aged either 12 or 13 years of age and in total 18 students were involved in the study. The unit of work consisted of eight hockey lessons taught once to each group giving a total of 16 hockey lessons which were observed for the purpose of this study. The students were taught in their regular PE groups as the teacher-researcher did not want to change the groups specifically for the purpose of this study. The teacher-researcher was a qualified Hockey Coach and also qualified in Rebound Therapy. The unit of Hockey had been taught to the same groups of students the previous year and none of the students had any physical conditions to stop them from taking part.

A case study research design was undertaken to provide an in-depth review of the teacher-researchers experience of teaching hockey using the TGfU model. According to Cresswell (2002), the ability to observe and study a teacher in a real-life situation will provide a range of sources rich with information. Case study research can be defined as the intensive study of a specific case such as a teacher in this situation in their real-life context (Gratton & Jones 2004). Two sources of data were utilised in this study, and they were semi-structured staff interviews and student questionnaires reflecting on their learning journey.

The interview questions were based on those created by Curtner et al (2008) about the teaching and learning impact of using the TGfU model. The interview questions focussed on how the teacher taught the lessons, the influences on the learning and how the games lessons had changed or could further change because of using the TGfU approach to teach hockey to the students. There were also research questions for the students based on their behavioural changes, engagement, and interaction levels and if there were any obvious issues arising from using of the TGfU model within their PE lessons.

The data which was gathered from the semi-structured questionnaires was taken at the beginning, middle and end of the unit of work. This was to give the data more validity and credibility because by cross referencing the two forms of data collection throughout the study shows that accuracy of the information can be tracked and an audit trail can be put together showing the research intentions and the raw data as it was coming in after each collection point (Markula and Silk, 2011). Using the benchmarks highlighted in Table 1 the teacher-researcher was able to develop the questions for both the staff and the students from these benchmarks.

For example, the questions examined the teachers use of the TGfU model and the improvements it had produced and the any other factors which had impacted the use of the model and whether these factors had come back because of his previous teaching experience or whether these were new teaching and learning factors.

A student questionnaire was designed to identify a five-point scale that would give a representative cross-section of a student's experience to improve measurements (Gehlbach & Artino Jr, 2018). The teacher-researcher used the Likert Scale as a method of good practice for designing the questionnaire. This is supported by the research of Carifio and Perla (2007) who viewed the Likert Scale as a way of measuring multi-items responses and that the scale is helpful and supportive to provide a unified result. The teacher-researcher encouraged the students to answer the questions openly and honestly and then went on to remind them that the information was going to be used without naming anyone.

The teacher-researcher used an adapted version of the questionnaire as described by Cervelló *et al.*, (2007). Originally the questionnaire consisted of 24 items that measured two dimensions firstly the task and the ego climates and all 24 of the questions started in the same way – “In my physical education (PE) lessons...” and then moved on to ask the students about how their activity levels had changed because of the introduction of the TGfU model into their PE lessons. The data was going to analysed using a general inductive approach to make sense of the data from two different sources (Thomas, 2006).

Permission to undertake the study was granted by the Trust Chief Executive (CEO). The CEO was given the reassurance that none of the students from the trust would be named for safeguarding purposes and all of the families of the students were going to be informed about the study and they were all happy to be involved for ethical purposes. The teacher-researcher did the necessary reading about this using the information provided by the British Educational Research Association (BERA, 2011) and gained full consent from all participating students' parents about the study and that the necessary arrangements were in place before, during and after the study to ensure the health and safety of everyone involved in the research. The BERA guidelines were adopted to address the ethical issues of deception, consent, privacy, disclosure, and accuracy. The aims, methods and intended uses of the data obtained were made clear to everyone taking part in the study. This ensured that the teacher-researchers privacy and ethical rights were not affected by this study as he had undertaken the study in a voluntary capacity.

## RESULTS

Inductive analysis of the data shows that the teacher-researcher was able to use the TGfU model effectively. This is because the information gained from semi-structured staff questionnaire shows that the teacher-researcher tried to use as many of the benchmarks from Table 1 as one as possible. The teacher-researcher commented on how helpful the table had been when planning his lessons and it also allowed him to reflect on the type of lessons that were taught across the duration of the whole unit. For example, the teacher-researcher tried to ensure all of the lessons were student centered and that each lesson had a tactical challenge which the students tried to solve through their games-based practices. The data also shows that the teacher-researcher was able to use a high level of tactical expertise during the lessons and he also encouraged all of the students frequently review and reflect on their learning by asking them a range of open-ended questions. For example, one question which kept arising was about how the students could outwit their opponents and become more successful in their play. A focus on the when, where and how questions was applied, and this helped the teacher-researcher continue to have an open dialogue with the students during the lessons and he continually asked them to think about using their skills to outthink their opponents.

Each lesson started with a clear learning objective, and these were based on the information in Table 1. For example, in the second lesson the teacher-researcher used the lesson objective to challenge the students to think about the tactics required for a small-sided game of hockey and how by using one or two simple tactics can lead to more success. The teacher-researcher continued to use his experience by ensuring all of the lessons were dynamic and each drill and practice were modified to keep in line with the principles of the TGfU model.

For example, in lesson four the teacher-researcher modified the playing area by making it smaller for the higher ability students and giving them less space to score a point. The teacher-researcher was very aware of the S.T.E.P. acronym which is a good way of remembering the principles of space, time, equipment, and people to modify games play. This was always the intention of the teacher-researcher to ensure that tactical play was placed ahead of any technical skill work because this was in keeping with the original work of Bunker and Thorpe (1982) and the main reason why the TGfU model was created.

The teacher-researcher had 18 years of experience in teaching physical education and therefore it was clear that he was experienced in using the TGfU model, but it was not something he had been taught at university while undertaking his Post Graduate Certificate in Education. The learning has taken place through his own research and interest in the area and

using this research to bring it into his teaching. Because the teacher-researcher was very child-centered and focussed on ensuring all of his PE lessons were very active the students had very little time to think about not being engaged in their learning and with every lesson starting with a lesson objective they knew from the beginning of the lesson what they would be learning, working on and reflecting at the end of the lesson.

This helped the teacher-researcher ensure that the behaviour, engagement and enjoyment levels in PE were high and students wanted to attend their PE lessons, and this helped the lessons run more effectively. The teacher-researcher kept the teaching talk and instructions down to a minimum and this also helped the students remain focussed and on-task more often which also kept up their high levels of self-discipline and respect for each other. There was a real focus on facilitating the learning of the students and allowing them to learn by overcoming problems and tactical challenges and this is also something which the teacher-researcher had to learn during his career (Light and Butler, 2005).

The student replies to their questions also support and back-up many of the statements by the teacher-researcher above. For example, all of the students in the study felt more engaged in their learning at the end of the unit. Also, all of the students had highlighted that they strongly agreed that they enjoyed this approach to learning and that they would like to follow another unit using the TGfU model in their PE lessons. There was only one student who did not enjoy taking part in his hockey lessons and this could be either simply and it would be for the teacher-researcher to explore this with the individual student before the next unit of learning. All of the students agreed that they felt they had learned something new in their hockey lessons and they also all agreed that learning hockey in this way by playing more games was more fun.

The students appeared to have more fun in their lessons, and they also noted that they liked to be in more control of the type of games they were playing in hockey. For example, all of the students strongly agreed that they liked to be asked about the type of games they could play at the beginning of the lesson as the teacher-researcher came across with a more liberal attitude to learning. This type of approach has also helped to improve the behaviour of the students with all of the students agreeing that they were better behaved in these hockey lessons than they were in other lessons in school. Because the lessons created competitive situations then the students with SEMH appeared more relaxed, calm and relieved to be experiencing a different approach to their traditional PE lessons and this is something the teacher-researcher would go on to explore in a further study with the same group of students. The teacher-researcher would look at the



cathartic characteristics of the students and how this

could be improved or adapted using the TGfU model.

**Table 1: Teaching games for understanding teacher and student benchmarks**

<b>TEACHER BENCHMARKS</b>
A principle of play and or / tactical problem is used to organise learning tasks
The lesson begins with a modified game to develop game appreciation
Modifications are used to ensure developmentally appropriate games and help the students solve problems
The teacher uses a high rate of tactical feedback during games
On and off the ball techniques and skills are taught as required
Open-ended questions are used to get the students to solve tactical problems
Peer / social interactions are evident
The modified game contains tactical intricacies of the adult game
<b>STUDENT BENCHMARKS</b>
Students are given time to think about open-ended questions
Students are engaged in making tactical decisions
Students make progress on tactical knowledge as they move from an initial game to a final game
Students have learned tactical awareness, decision making and skill execution

(Adapted from Metzler, 2011)

## DISCUSSION

The teacher-researcher made every effort to follow the benchmarks set out in table 1 and created a series of lessons which were designed to follow the same principles as the original model created by Bunker and Thorpe (1982). The teacher taught a range of tactical lessons throughout the hockey unit, and these were all planned prior to the unit starting built around the principles of the TGfU model. Therefore, the teacher-researcher has been able to follow the instructional TGfU model, its intentions and the learning characteristics of the while learning about how to implement it in his PE lessons with students who have SEMH. It was a challenge that the teacher-researcher was not sure whether it would work and whether the students would take to learning PE in a new way and whether they would engage in a different style of teaching (Stroot & Ko, 2006).

But the data from the study has shown that this approach can work and that PE colleagues could also learn how to follow the TGfU model and apply the model into their own practices and share this learning across families of schools / trusts or within their own PE departments. The teacher-researcher has been very proactive in researching the TGfU model and implementing this into his teaching practice and this is something other colleagues must be open to if they are going to experiment with this type of teaching practice. This dynamic attitude of the teacher-researcher is in line with the whole trust policy of ensuring the students are placed at the heart of the learning within the school and that staff can be trusted to be innovative. For a PE Teacher to be able to effectively learn and implement the model they must be given time to learn how to apply the model within their own school contexts (O'Leary, 2016).

The study also demonstrates the importance of having a teacher who is willing to be proactive in

researching new ways and ideas to help improve his / her own pedagogical knowledge and how important this is when starting a new approach to teaching and learning such as using the TGfU model to teach games in PE. The teacher-researcher had to trust his own practice and be confident that he had a good rapport with the students and knowing their needs and this would concur with the research by Casey (2014). For a teacher to be able to apply the TGfU model they must be comfortable and confident in their ability to communicate the learning to the students and also be able to ask open-ended questions from the TGfU model to extract the views and opinions from the students (Butler and Griffin, 2010).

## CONCLUSIONS

The findings above are based on a single-participant case study over a relatively short time-scale and this is one clear limitation of the study and a future study would focus on a larger number of PE teachers with varying degrees of experience and this would give further credibility as to whether all of the colleagues could become socialised from one another and whether this would be the most significant factor to learning how to use an instructional model to teach games in PE such as the TGfU model. Experience in this study has shown that it is possible to learn how to teach games in PE using the TGfU model in a way of becoming more student centered.

Furthermore, there is further research needed which looks at the holistic teaching of students with SEMH and whether it could be the school setting, the staff interests or backgrounds, the school policies or another factor which would have the greatest impact on the overall learning experience of the students in a special school learning how to play different games using an instructional model. Another study to adopt a different model such as Sport Education could be compared to the results from the TGfU model, and this

and would provide further research to examine how the TGfU model could be applied in either the same or a different school setting.

## REFERENCES

- Allison, S., & Thorpe, R. (1997). A comparison of the effectiveness of two approaches to teaching games within physical education. A skills approach versus a games for understanding approach. *British Journal of Physical Education*, 28(3), 9-13.
- Amado, D., Del Villar, F., Leo, F. M., Sánchez-Oliva, D., Sánchez-Miguel, P. A., & García-Calvo, T. (2014). Effect of a multi-dimensional intervention programme on the motivation of physical education students. *PLOS one*, 9(1), e85275.
- Arias-Estero, J. L., Castejón, F. J., & Yuste, J. L. (2013). Psychometric properties of the intention to be physically active scale in primary Education. *Revisit the Education*, 362, 485-505.
- Barba-Martín, R. A., Bores-García, D., Hortigüela-Alcalá, D., & González-Calvo, G. (2020). The application of the teaching games for understanding in physical education. Systematic review of the last six years. *International Journal of Environmental Research and Public Health*, 17(9), 3330.
- Barrett, K. R., & Turner, A. P. (2000). Sandy's Challenge: New Game, New Paradigm. *Journal of Teaching in Physical Education*, 19(2), 162-181.
- Bechtel, P. A., & O'Sullivan, M. (2007). Enhancers and inhibitors of teacher change among secondary physical educators. *Journal of Teaching in Physical Education*, 26, 221-235.
- BERA. (2011). Ethical Guidelines for Educational Research. Available at: <https://www.bera.ac.uk/publication/ethical-guidelines-for-educational-research-2018-online>. (Accessed 25.7.22).
- Bunker, D., & Thorpe, R. (1982). A model for teaching games in secondary schools. *Bulletin of Physical Education*, 18(1), 5-8.
- Butler, J. (1996). Teacher responses to teaching games for understanding. *Journal of physical education, recreation and dance*, 67(9), 17-20.
- Butler, J., & Griffin, L. (2010). More teaching games for understanding: moving globally. Champaign: IL Human Kinetics.
- Butler, J. (2014). TGfU - Would you know it if you saw it? Benchmarks from the tacit knowledge of the founders. *European Physical Education Review*, 20(4), 465-488.
- Casey, A., Dyson, B., & Campbell, A. (2009). Action research in physical education: focusing beyond myself through cooperative learning. *Educational Action Research*, 17(3), 407-423.
- Casey, A. (2014). Models-based practice: great white hope or white elephant? *Physical Education and Sport Pedagogy*, 19(1), 18-34.
- Creswell, J. (2002). *Qualitative Inquiry and Research Design: Choosing among five approaches*. Thousand Oaks, California: Sage.
- Curtner-Smith, M., Hastie, P. A., & Kinchin, G. D. (2008). Influence of occupational socialization on beginning teachers' interpretation and delivery of sport education. *Sport, Education and Society*, 13(1), 97-117.
- Dania, A., Kossyva, I., & Zounhia, K. (2017). Effects of a teaching games for understanding program on primary school students' physical activity patterns. *European Journal of Physical Education and Sport Science*, 3(2), 81-94.
- Dyson, B., & Casey, A. (2016). *Cooperative Learning in Physical Education and Physical Activity: A Practical Introduction*. Publisher: Routledge Books.
- Dyson, B., & Griniski, S. (2001). Using Cooperative Learning Structures in Physical Education. *Journal of Physical Education and Dance*, 76, 2.
- Dyson, B. P., Linehan, N. R., & Hastie, P. A. (2010). The Ecology of Cooperative Learning in Elementary Physical Education Classes. *Journal of Teaching in Physical Education*, 29(2), 113-130.
- Gehlbach, H., & Artino Jr., A. R. (2018). The survey checklist (manifesto). *Academic Medicine*, 93(3), 360-366.
- Goodyear, V. A., Casey, A., & Kirk, D. (2016). Practice architectures and sustainable curriculum renewal. *Journal of Curriculum Studies*.
- Gratton, C., & Jones, I. (2004). *Research Methods for Sports Studies*. London: Routledge.
- Haerens, L., Kirk, D., Cardon, G., & De Bourdeaudhuij, I. (2011). Toward the Development of a Pedagogical Model for Health-Based Physical Education. *Quest*, 63, 321-338.
- Hastie, P., & Casey, A. (2014). Fidelity in Models-Based Practice Research in Sport Pedagogy: A Guide for Future Investigations. *Journal of Teaching in Physical Education*, 33(3), 422-431.
- Hopper, T., & Kruisselbrink, D. (2001). Teaching Games for Understanding: What does it look like and how does it influence student skill acquisition and game performance? *Journal of Teaching Physical Education*.
- Hortigüela, D., & Hernando, A. (2017). Teaching games for understanding: A comprehensive approach to promote student's motivation in physical education. *Journal of Human Kinetics*, 59(1), 17-27.
- Kirk, D., & McPhail, A. (2002). Teaching Games for Understanding and Situated Learning: Rethinking the Bunker-Thorpe Model. *Journal of Teaching in Physical Education*, 21(2), 177-192.
- Kirk, D., & Macdonald, D. (2001). Teacher Voice and Ownership of Curriculum Change. *Journal of Curriculum Studies*, 33, 551-561.

- Kirk, D. (2010). *Physical education futures*. London: Routledge.
- Kirk, D. (2017). Teaching games in physical education: Towards a pedagogical model. *Revista Portuguesa De Ciências Do Desporto*, 17 (S1A), 17–26.
- Kirk, D. Arius, A., & Morales-Belando, M. (2020). A Systematic Review of Teaching Games for Understanding Intervention Studies from A Practice-Referenced Perspective. *Research quarterly for Exercise & Sport*.
- Koekoek, J., & Knoppers, A. (2015). The role of perceptions of friendships and peers in learning skills in physical education. *Physical Education and Sport Pedagogy*, 20(3), 231–249.
- Launder, A. G. (2001). *Play practice*. Leeds: Human Kinetics.
- Light, R., & Butler, J. (2005). A personal journey: TGfU teacher development in Australia and the USA. *PE & Sport Pedagogy*, 10(3), 241-254.
- Light, R. (2013). *Game sense: Pedagogy for performance, participation, and enjoyment*. London: Routledge.
- Lund, J., & Tannehill, D. (2010). *Standards-based physical education curriculum development*. Burlington, MA: Jones and Bartlett.
- Markula, P., & Silk, M. (2011). *Qualitative research for Physical Culture*. London: Palgrave Macmillan.
- Miller, A. (2015). Games centered approaches in teaching children & adolescents: Systematic review of associated student outcomes. *Journal of Teaching in Physical Education*, 34(1), 36–58.
- Metzler, M. W. (2005). Tactical games: Teaching games for understanding. In M. W. Metzler (Ed.), *Instructional models for physical education* (pp. 401–438). Holcomb Hathaway.
- Metzler, M. W. (2011). *Instructional Models for Physical Education*. 3rd ed. Scottsdale, Arizona: Holcomb Hathaway.
- Oliver, L. & Nieves, A. (2017). Navigating the benefits and challenges of teaching games for understanding. *Autumn Journal of PE Matters. AfPE*, 55-58.
- O’Leary, N. (2016). Learning informally to use teacher games for understanding. The experiences of a recently qualified teacher. *European Physical Education Review*, 20, 367-384.
- Pill, S. (2011). Teacher engagement with teaching games for understanding games sense in physical education. *Journal of PE & Sport*, 11(2), 115-123.
- Robinson, D., & Foran, A. (2011). Pre-service physical education teachers’ implementation of TGfU tennis assessing elementary students’ game play using the GPAI. *Phenex Journal/Revue Phéneps*, 3(2), 1-19.
- Rossi, T., Fry, J. M., & McNeil, M. (2007). The games concept approach (GCA) as a mandated practice. *Sports Education and Society*, 12(1), 93-111.
- Siedentop, D. (1982). *Movement and sport education: current reflections and future images*, paper presented at the Commonwealth and International Conference on Sport, Physical Education, Recreation and Dance, Brisbane, Australia, June.
- Stolz, S., & Pill, S. (2014). Teaching games and sport for understanding: Exploring and reconsidering its relevance in physical education. *European Physical Education Review*, 20(1), 36–71.
- Stoot, S., & Ko, B. (2006). *Induction of beginning physical educators into the school setting*. The handbook of PE: London Sage.
- Thomas, D. (2006). A general inductive approach for analysing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237-246.