

## PEDAGOGY

# Authentic Assessment in Physical Education: A Case Study of Game Sense Pedagogy

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## Abstract

*The use and promotion of the term authentic assessment (AA) in the literature and among physical education (PE) practitioners is widespread. However, the meaning and application of this concept are misunderstood, in education generally, in its application to PE, and in its application to specific pedagogical approaches within PE, such as Game Sense. The purpose for writing this two-part paper was to clarify the term AA and provide insight into the challenges for such assessment in Game Sense pedagogy. In part one, we provide a conceptual and theoretical background to AA, drawing on a model from higher education to clarify key characteristics. In doing so, we outline why the term is problematic in PE. In part two, we draw on interviews with practicing PE teachers to highlight the issues in Game Sense assessment from their perspective, and we present strategies to address those issues.*

In Australia, with the impending introduction of the National Curriculum in 2015, there has been increasing pressure for officials in key learning areas to justify the inclusion of their topic; this presents challenges for the position of physical education (PE) within

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schools. Advocates of the Australian National Curriculum seek to align the previously disparate state curricula and focus on developing national literacy and numeracy. Subsequently, curriculum areas that are not clearly linked to improving these domains have been marginalized, with teaching time and allocated resources being reduced. Due to the concurrent focus on national assessment of literacy and numeracy, deficiencies in PE assessment have been highlighted, and few researchers have addressed issues regarding assessment in PE. In particular, there are concerns about valid and authentic forms of assessment for learning. In this paper, we specifically address authentic assessment (AA) issues associated with Game Sense pedagogy in PE and highlight that even though this pedagogy has been recongnized in the academic literature and adopted in the practical setting, research based on practical aspects of its application, such as assessment, is still needed. Although specifically addressing Game Sense and AA in this paper, we argue that, in general, PE assessment reform needs to be implemented in line with contemporary global education theory and practice.

Since the mid-1990s, researchers have acknowledged AA as an area for reform in PE (Hay, 2006; Kirk, MacDonald, & Sullivan, 2006; Penney, Brooker, Hay, & Gillespie, 2009; Smith & Cestaró, 1998; Welk, 2008) and more specifically as a rational approach to contextual, games-based pedagogies, such as Game Sense (Gréhaigne, Godbout, & Bouthier, 2001; Oslin, Mitchell, & Griffin, 1998). However, the lack of discussion of AA in the PE literature is notable.

This neglect of AA is not surprising. Hay and Penney (2009) pointed out that general discussion regarding assessment in this field is lacking. They presented a model for efficacy in PE assessment that includes (a) a primary focus on assessment for learning, (b) AA, (c) assurance of validity, and (d) socially just approaches to assessment. They contributed substantially to the clarity of understanding in this area. They also listed AA as a key criterion for efficacious assessment. However, researchers need to further expound and clarify the role of AA if it is to continue to be promoted as a critical, if not the central, characteristic of models of best practice in this field. Furthermore, as we will demonstrate through our exploration of this term, high-quality AA is challenging to practitioners as it has not been explained in the literature to date. Authors who refer to AA in research literature and PE texts today tend to make only superficial references to the concept and, perhaps because the characteristics of

AA have not been clearly expounded, fail to provide concrete examples of AA that are needed for teacher professional development and professional practice.

However, this problem is not limited to PE. More broadly in education literature the term *AA* continues to be adopted and applied, and a database search of the term would result in several definitional positions. We acknowledge these positions in this paper; however, to be pragmatic, we ultimately present one recent and informed definition and its conceptual framework as a means of exploring AA and the underlying theoretical assessment issues. We go on to consider teachers' accounts of assessment in Game Sense with reference to the conceptual framework and discuss how they can meet the challenges of AA effectively. We analyze current practice against a model based on Gulikers, Bastiaens, and Kirschner's (2004) five-dimensional framework for AA. Therefore, this paper is a critical case study of physical education AA, specifically an investigation into Game Sense assessment in the Australian school setting with interviews of 17 practicing teachers.

## **Literature Review**

Assessment has recently been pivotal in broad education reform, and it has been acknowledged that in the fields of physical education, school sport, and community sport, assessment issues are not center stage. Only a couple of years ago, Penney et al. (2009) noted, "Given the recognition within mainstream education literature of the inter-dependence of curriculum, pedagogy and assessment, the relative dearth of assessment literature in P.E. is both somewhat surprising and a concern" (p. 434). The lack of emphasis on assessment in PE was first noted almost 15 years ago by MacDonald and Brooker (1997), who advocated for "the need for assessment programmes and practices to be underpinned by fairness and equity principles, and for teacher judgements about student performance to be comparable within and across schools" (p. 84). Despite this deficit, the term *AA* has been widely adopted and presented as the mantra in this field. Authors in recent texts have advocated the use of AA (e.g., Meldrum & Peters, 2012).

## **What Is Authentic Assessment?**

Many definitions of AA are presented in the academic literature; all (Cumming & Mawell, 1999; Hart, 1994; Lund, 1997) agree that AA is the use of real-life, or authentic, tasks and contexts and multiple methods of assessment. However, Gulikers et al. (2004) noted,

Increasing the authenticity of an assessment is expected to have a positive influence on student learning and motivation... Authenticity, however, is only vaguely described dimension of assessment, because it is thought to be a familiar and generally known concept that needs no explicit defining. (p. 68)

The lack of explicit description has led to confusion, and there is also a surprising lack of exemplars to clarify the situation of PE assessment in an Australian educational context. We are in agreement with Swaffield (2011), who sees authentic as equivalent to genuine (p. 434). Hay and Penney (2009) described AA as assessment that “pursues tasks and foci that are meaningful to students and that have value and meaning beyond the instructional context” (p. 394). However, there is a substantial leap between acknowledging the relevance of AA and being able to implement or formulate an AA task. We believe the term needs to be further articulated and exemplified as well as examined in relation to the practical perspectives of teachers.

Gulikers et al. (2004) reviewed the literature on AA and presented a five-dimensional framework for developing AA tasks. This is shown in Figure 1. These authors validated their model against the perceptions of students and teachers in a nursing college. In this paper, we use their model as a benchmark to examine teachers’ current self-reported practices in Game Sense assessment.

### **A Model of Authentic Assessment**

Gulikers et al. (2004) presented a five-dimensional framework for AA. Four dimensions are about the nature of the assessment activity and the fifth dimension is about the assessment criteria, which sit beside the assessment activity but are pivotal in determining the quality and educational value of the activity. For AA, the assessment criteria must be based on activities and skills that relate to real-life experiences (outside the formal educational setting). The competencies required for these activities must be explicit, transparent, and communicated to students before the assessment activity. Furthermore, criterion- or standards-referenced scoring should be used so students receive a “profile” of their competencies of what they have and have not achieved, not simply a total mark.

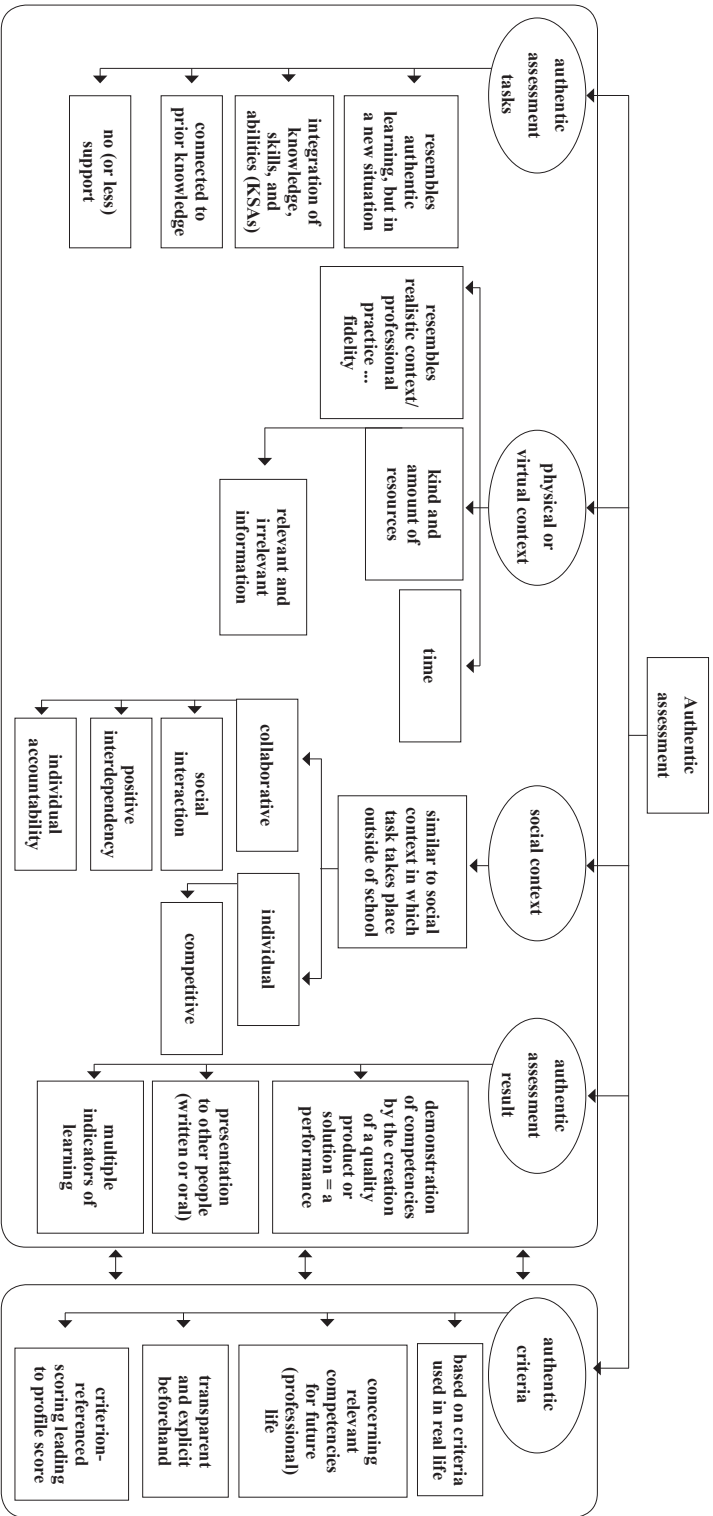


Figure 1. From “A Five Dimensional Framework for Authentic Assessment,” by J. Gulikers, T. Bastiaens, and P. Kirschner, 2004, *Educational Technology Research and Development*, 52(3), p. 73.

The setting of appropriate authentic criteria is one challenge in making PE assessment authentic. This requires teachers to think about how the skills they are teaching relate to the world beyond the school setting. Current practice with drill and skill assessment involving measurement of isolated physical skills, for example, cannot be established as authentic because it holds little relevance for most students' lives beyond school. However, assessment through which students improve through personal goal setting and training is more authentic.

Once teachers decide on the appropriate criteria, they need to develop the task. According to Gulikers et al. (2004), for assessment to be authentic, teachers must present the task in a new situation, with no, or minimal, support. This is the ultimate test of the learning outcomes because students are required to transfer what they learn, as it is anticipated they will need to transfer all school learning beyond the school; this is a critical feature of AA. Furthermore, for assessment to be authentic, students must integrate knowledge, skills, and attitudes and thus will need to build upon their existing learning. Meeting these criteria in professional and technical/vocational education is not easy. To develop AA tasks for PE, teachers need to ask, how do the knowledge, skills, and attitudes learned in class relate to contexts beyond the classroom and possibly beyond physical activity?

Gulikers et al. (2004) also provided details on developing tasks in physical contexts, in social contexts, and in relation to how learners understand the task and its assessment results. In some fields, development of authentic physical contexts involves simulation. However, in PE it may require developing a context that resembles social-competitive sports environments seen in the greater world. In terms of authentic social contexts, learning outside of school mostly occurs within social systems, so teachers need to pay attention to this dimension when using AA. In Game Sense PE, for example, teachers may use AA to evaluate teamwork, communication, and other social aspects of tasks.

### **What Is Game Sense?**

Researchers have highlighted that while using traditional skill- and drill-based approaches to teaching, PE teachers have excluded and marginalized student who are less skilled and less confident (Light, 2013). In response to this, Bunker and Thorpe (1982) proposed Teaching Games for Understanding (TGfU) as an alternative to traditional skill-led approaches to games and sports teaching. In

Australia, TGfU is known as Game Sense, and throughout this paper, the term *Game Sense* will be used.

In the traditional drill and skill approach, students are introduced to the key skills they need to master before playing the game. For example, students learn the skills of dribbling, passing, and shooting before they play basketball. The curriculum is focused on students learning the skills of the sport in an isolated manner, and teachers model the correct way of executing the skill. There are a number of problems with the skill and drill approach and these include the skill development occurs out of the context of the game; the approach does not consider the complexity of learning; the approach lacks meaning and relevance to students, especially those who have never seen the sport; the approach lacks social aspects of sports; the approach is a teacher-centered pedagogy; and skill does not always transfer into the game (Light, 2013).

In the Game Sense approach, individuals learn within the context of the game and teachers employ questioning instead of direct instruction. All learning occurs in the game situation, and the highlights of learning are intellectual and social aspects of games such as awareness and technical understanding, cognitive and affective development, and immediate involvement in games, which is motivating for students (Light, 2008; Light, 2013).

The adoption of Game Sense has repercussions for the teacher. The teacher becomes the facilitator of learning who provides opportunities for learning; the approach is student-centered, with an emphasis on active engagement in learning, at individual and group levels. Students solve problems in small, modified games and ask questions. They receive consistent feedback and their own knowledge is valued; moreover, they are encouraged to have equitable relationships and be creative, cooperative, and collaborative.

In Game Sense, teachers introduce the students to the sport through a progressive sequence of modified small-sided games to provide opportunities for learning. Skill demands in games are varied, and thus, students of all skill levels can participate. The games are inclusive and are designed to minimize domination by individual students. Teachers do this by introducing sport-specific rules, such as a “no contact” rule in netball and “three step dribbling” in basketball. The games are sequenced from simple to complex, and teachers build on previous games and understandings. Teachers explain the aim of the game and the rules and limitations of the game. Students are then allowed to play the game, and the teacher encour-

ages learning through asking questions to individuals and groups; for example, the teacher may ask, “Why did you move to the left of the field? What led you to pass to that player?” By reflecting on tactics and game strategies through such questions, students are developing a deep understanding of game play. As games become more complex, teachers encourage team discussions. Skill should only be focused on within game situations. That is, skills are not abandoned but developed in the context of the game.

### **Game Sense Assessment**

In Game Sense, the aim of assessment is to evaluate the overall game performance, whereas in the traditional skill-led practices for games and sports, the assessment is focused on executing skills. Because Game Sense learning is focused on learning to play and understanding the game as a whole and not on discrete parts of the game such as technique, testing skills out of context of a game is not an AA approach. A skills test outside of a game context is not an adequate measurement or assessment of learning objectives, and it is not used to assess performance in the game. AA is used to assess performance, knowing how to do a skill such as defend a pass, rather than knowing about a skill. Traditional assessment approaches in PE are often product oriented with a focus on components of fitness or decontextualized as in the case of assessment of isolated skills (Penney, Gillespie, Jones, Newhouse, & Campbell, 2011).

Assessment in physical education is complex because much of what students learn is through the physical. Assessing students’ skill improvement, attitude toward physical activity and teamwork, and thinking skills in games may be problematic, as students are moving. The assessment of written work is not central to PE learning. Van der Mars and Harvey (2010) noted that historically students were assessed on uniform and effort in class. Assessment of physical skills is a requirement of physical education, but what about the cognitive and affective outcomes such as sportsmanship, teamwork, and understanding strategy? In the direct skill approach, skills are assessed through testing, but what is assessed in Game Sense?

Several Game Sense textbooks have been published in the last decade, but the authors give minimal treatment to assessment. For example, Breed and Spittle (2011) devoted three pages (pp. 78–80), or less than 1%, to assessment. This was also neglected at the ACHPER International Conference held in Adelaide in 2011; only one paper was devoted to assessment (Penney et al., 2011). Nevertheless, at a more academic level, two assessment models for Game

Sense have been developed; these are outlined next. The questions are whether and how these models are implemented in Australian schools and how consistent these models are with the characteristics outlined in theories relating to AA.

### **Assessment Instruments: GPAI and TSAP**

The Game Performance Assessment Instrument (GPAI) and the Team Sport Assessment Procedure (TSAP) are game performance and understanding assessment instruments. Griffin, Mitchell, and Oslin (1997) created the GPAI, intending to “provide teachers and researchers with a means of observing and coding performance behaviours that demonstrate the ability to solve tactical problems in games by making decisions, moving appropriately, and executing skills” (p. 4).

Gréhaigne, Godbout, and Bouthier (1997) concurrently developed a similar instrument: the TSAP. Their primary objective in developing this instrument was to provide teachers with information on student performance in invasion and net games. The TSAP is used to evaluate performance in games that quantifies players’ overall offensive performance in selected invasion and net team sports. The teacher observes play within the game and codes game play on an observational grid. The teacher calculates performance indexes and a score. Gréhaigne et al. originally designed the assessment procedure as a form of peer assessment in which students worked in pairs during small-sided games with one playing and the other coding. TSAP is focused mainly on how students receive the ball and how students dispose of the ball, and although these data are quantitative, they have much qualitative meaning about how students played the game. The TSAP is an assessment tool used to evaluate performance, teamwork, and skill development (Gréhaigne, Wallian, & Godbout, 2005). Using the tool, students assess their partner according to how the player gains possession of the ball and off-loads the ball. However, to date, no researchers have explored the AA credentials of TSAP or GPAI.

### **Teachers’ Perspectives of Game Sense Assessment**

To explore teachers’ perspectives, we interviewed 17 PE teachers from 17 New South Wales government schools, as part of a larger study of the structure and effectiveness of PE in government high schools. Teachers who fit the criteria of having completed an undergraduate PE degree and currently teaching PE full time in government schools were invited to participate in the study.

University ethics policies were adopted and one interview was conducted. The semistructured face-to-face interview included several themes, one of which was assessment. The second author conducted the interviews outside of school time and the school settlement. Teachers were asked, “Tell me about physical education and Game Sense assessment at your school.” Through this open-ended question, participants were able to describe and interpret issues from their own perspective with a greater depth of response than through closed-ended questions (Babbie, 2005). Probes were used where necessary to evoke responses that related to teachers’ general views of assessment issues and teachers’ individual current practice. Probes were focused on issues surrounding the use of Game Sense in their particular school and general methods of assessing Game Sense and other physical activities. Interviews were taped and transcribed verbatim. The data from the interviews were analyzed using an inductive approach (Thomas, 2006). Thematic analysis was then undertaken to investigate emerging ideas and identify themes.

For this analysis, we extracted references to assessment related to Game Sense and variant pedagogies. These are presented next in a critical discussion of the five criteria presented by Gulikers et al. (2004).

### **Setting Authentic Criteria**

All teachers commented on criteria with regard to assessment. However, in the majority of cases, the relevance of the criteria to curriculum and to the world outside of school was unclear. Some respondents downplayed the formal aspects of assessment, including the setting of criteria. James, who had been teaching for 3 years, believed that criteria should not be a part of devising a task:

In our school we have a large Asian population and they are not keen on anything physical. Assessment is not something we spend a lot of time on. Getting them having fun and participating in the activities is our main goal. For me this is the only important criterion.

Some respondents mentioned criteria with little relation to Game Sense approaches, that is, their established models of assessment. Tim commented,

We use Game Sense in classes, but the assessment is generally based on attendance, effort in class, you know... the usual. I always try to reward the students [who] make an effort.

Five teachers reported on assessment more closely aligned to the Game Sense curriculum; however, none of them commented on authenticity, that is, how assessment is related to life and life skills beyond school. Also notably lacking was mention of whether the criteria were clearly defined and communicated to students; although in the case of the eight teachers employing GPAI and TSAP, the use of peer assessment presumes that students are aware of criteria. For example, Brenda commented,

We assess on several criteria related to the Game Sense philosophy: team play, level of involvement, general tactical ability. We rate students on these; we do a few of students each week. That way we cover the class.

Teachers need to develop awareness of authentic criteria by reflecting on the aims and objectives of their teaching and what they mean in terms of skills and knowledge that students may use beyond school. Teachers reported a problem among learning objectives, teaching/curriculum, and assessment:

We had a system in place before I got here, where the students did Game Sense for most of their classes and then were assessed on skill level. It seemed quite stupid.... The problem was that initially no valid criteria set and then no link to them. (Vanessa)

### **Authentic Assessment Tasks**

Although level of implementation of Game Sense pedagogy in Australian schools has not been addressed in any study, 15 of the 17 participants in this study have used Game Sense in their teaching. Almost all of the teachers used Game Sense pedagogy, but only eight used Game Sense assessment tools based on TSAP or GPAI. From their responses, it was clear that these assessment tools worked well. John noted the effectiveness of TSAP and was taken aback by one student's response to it:

One of the Year 10 boys told me that they were not the fastest person in the class and so always did badly in sprint tests.

Their ability to read the game enhanced his results as he was able to successfully conquer the ball and pass it effectively on several times. From then on I used it [TSAP] for all my games classes. (John)

Teachers reported major benefits of TSAP and GPAI: learning through peer assessment and flexibility in application to many sports. They regarded these positively, but also highlighted assessment challenges. Heather and James were introduced to TSAP during pre-service training and used the assessment tool in their first appointments. Heather claimed the students reflected on the nature of the game when she used teacher assessment and peer assessment:

On most occasions the students who assessed first scored higher than their partners who played first. This is because they thought about what constitutes good team play and what you needed to do to get high marks.

James noted:

The older kids are pretty kind on each other. The first time I attempted peer assessment all the students had very high scores. Peer assessment needs students to be mature, and unfortunately, many of them want to help each other. My other option was to video tape the students and then individually go through the tapes. This would take hours upon hours. Everything else is subjective.

Teachers spoke enthusiastically about peer assessment, but they also noted the challenges for the reliability of this assessment and the need to weigh this disadvantage against the potential learning benefits. The teachers made positive comments about peer assessment, affirming the *assessment for learning* credentials of these approaches; however, they did not confirm these assessments are truly authentic.

Second, teachers commented how they can readily apply the approaches to invasion games such as netball, football, and touch football, but how they are less effective when applied to other team sports in the striking and target game categories:

We are big on softball and cricket in physical education because two of the teachers are keen on these sports. TSAP would be useless for softball and cricket, not to mention any

other target sports or for that matter tennis or badminton, which we do not cover anyway. (Nicholas)

Several teachers also critiqued the TSAP and GPAI assessment methods:

While TSAP is not perfect, it is quite clear, to me anyway, that the scores reflect more on the students' participation, understanding of the sports and general involvement in class. Simply assessing a skill like kicking or throwing is OK, but it needs to be done at the very least in conjunction with decision making team play and other concepts. (Richard)

However, despite some critique, it was clear that, among this group, the alternative assessments such as The Beep Test or Fundamental Movement Skills inventory test were viewed as less superior. Of the nine teachers not using TSAP or GPAI, the majority reported assessing participation/effort and testing summative skills using inventories. Teachers using TSAP or GPAI commented positively on various aspects, particularly in relation to learning, but did not refer to their approaches as AA. No teachers commented on the desire for authentic criteria or tasks. We can only infer that students developed transferable skills from the process of peer assessment. Certainly, none of the teachers explicitly referenced how the assessments relates to knowledge or skills relevant beyond the school context. More particularly, teachers did not comment on the existing knowledge or attitudes of students and how they may integrate these concepts into AA, as presented by Gulikers et al. Essentially, assessment was presented in a vacuum where prior learning and social contexts, commented on elsewhere in the interviews, were not mentioned in relation to how the assessments were developed or implemented.

### **Physical or Virtual Context**

AA needs to be conducted in contexts that directly relate to contexts where students may use the learning in the future. In Gulikers et al.'s (2004) model, it is an important feature because some professional learning assessment is conducted using simulations, real and virtual. In PE, the assessment contexts are generally fixed and stable: assessment of baseball skills, for example, is usually conducted during a baseball game. If the skills are not assessed in a game (e.g., fundament movement skills), the assessment is not authentic. In

Game Sense, the teacher may assess baseball using a game that is modified socially and physically; however, the modification tends to be a “scaling down” of the key characteristics, and thus the characteristics of the full game are preserved.

The teachers interviewed did not comment explicitly on the context or setting of the assessments; however, it was apparent that most assessment was conducted during class-time activities that directly relate to physical activity, games, and sports students may play beyond school. However, six teachers reported assessment using fundamental movement skill inventories, and these do not meet this criterion for authenticity. When skills are assessed in isolation, the assessment cannot be authentic, because in real life, skills are not used in isolation.

### **Social Context**

Authentic social, as well as physical, contexts are important in AA. Teachers commented on the social dynamics of their classrooms, but these comments were not related to assessment practices, except when the eight teachers using TSAP and GPAI discussed the dynamics of peer assessment processes. Heather commented,

Look, the students are involved in the grading and that makes them more engaged socially. They are watching each other. They also know they need teamwork to achieve individually. Compare that to the beep test where most students get eliminated or eliminate themselves in the first two stages and then watch some gifted athletes getting to stage sixteen thirty minutes later.

Almost all of the 15 teachers who used Game Sense commented on social interaction and teamwork. They said,

I use Game Sense because I feel it engages my students more and classes flow easily and quickly because they are having fun. (Brenda)

Really.... anything else doesn't get them all involved and you spend most of your time shouting and ordering students to do things. I am at a stage now where I turn up to class, set the games up and facilitate learning. (James)

In a 4-versus-4 cross game, I stood back and watched as two kids who would never have spoken on the playground had to work together and actually started chatting about other things as they were running around. (Heather)

However, few analytic comments were made that related the social aspects of Game Sense, such as teamwork, communication, or cooperation, to assessment using TSAP, GPAL, or other approaches. Only one teacher commented that the students were learning transferable social skills through Game Sense, and presumably its assessment:

I love Game Sense because my students enjoy it and I know they are developing team skills that they can use elsewhere. If I do basic skills with them, many don't enjoy it and there's often no teamwork. (Brenda)

AA needs to be completed in an authentic social setting that directly reflects a social setting that students will encounter elsewhere in life. Performance must also be recognized and evaluated within that social setting. Game Sense is a platform for this, and to be assessed for tactical understanding, students need to understand teamwork. This element could be developed more in Game Sense, as in the authentic social setting of Game Sense activities, students develop several transferrable social skills. One teacher commented,

The less evasive nature of Game Sense was quite clear. The fear factor was not as great. One of the strengths of the assessment is that students are having fun enjoying the game, and teachers need to incorporate fun ways of assessment in order to encourage maximum participation without the students getting to nervous by the word "assessment." (Richard)

### **Authentic Assessment Results**

In AA, the teacher needs to demonstrate the skills or competencies. In PE, this is a performance assessment. The teachers reported several assessment results: attendance marks, effort grades, and indicators such as Volume of Play, Efficiency Index, and Performance Scores on which students are assessed by peers in TSAP and GPAL.

Teachers reported using the peer assessment grids for TSAP and GPAI, which include multiple indicators of performance. Brenda noted,

Students know the whole thing, the grid and how to score it. There are several things they need to think about, ways they can get points.

This shows that the Game Sense assessment results are authentic because the assessment requirements are clear and the assessment includes multiple indicators, and the students have to understand those indicators because they are doing peer assessment. It was not clear from interviews whether teachers used demonstrations and exemplars to reinforce students' understanding of the assessment results. These may also be used to build authenticity in assessment results.

In particular, through peer assessment, as reported by eight teachers using TSAP and GPAI, students understood the meaning of assessment. These teachers' use of peer assessment is supported by Gréhaigne, Godbout, and Bouthier (2001), who noted that students are provided with more opportunities to learn and develop a greater understanding of the concepts and tactics associated with each game not only due to their active involvement in these games, but also through the peer assessment that occurs during the TSAP process. Two teachers reported that students who were assessing could be observed encouraging their partner to perform and coaching them from the sidelines, providing feedback to improve their player's performance.

## Conclusions

AA is dominant in the current rhetoric of best practice in PE. However, we have ventured to show that further attention is needed if the potential benefits of AA and assessment for learning are to be reaped. We have used Gulikers et al.'s (2004) model of AA practices to analyze current literature and practice, as reported by 17 teachers.

Game Sense pedagogy influence was widespread for the teachers in this study; however, not all teachers used game performance and understanding assessment tools such as GPAI and TSAP. Some teachers used assessment, which was incongruent with Game Sense learning objectives, which was not authentic in nature and unlikely to promote learning. Eight of the teachers, however, used GPAI or TSAP. These assessment tools meet some of the criteria for AA set

out by Gulikers et al. (2004). In particular, they involve authentic physical and social contexts with strong multiple indicator assessment results. However, there is room to develop AA through more authentic learning objectives; in other words, objectives more closely related to performance in physical and social activities outside of school. Assessment could also be more authentic through the tasks used. For example, peer assessment of tallies in volume of play could be complemented by other approaches including qualitative grading of teamwork. Teachers highlighted the strengths of peer assessment; however, the difficulties in developing and maintaining reliability in peer assessment cannot be ignored. Thus, teachers should use more diverse approaches.

The report of teachers not using systems such as TSAP and GPAI is concerning, as questions may be raised about the validity, success, and authenticity of their assessment procedures. How can a student be accurately assessed on syllabus outcomes if the teacher only marks an assessment based on their skill acquisition and proficiency? Tactics and team play need to be covered in assessment. When teachers accept a games-centered approach to teaching games, it should be assumed that the playing of games provides an authentic scenario for assessment. Thus, if teachers choose to use games-centered approaches to PE, they must also assess students in the context of a game.

As a final point, in general, deeper reflection on the aims and possibilities for assessment in PE is needed. The literature in this field and the teacher interviews show that researchers need to understand the position of PE within the broader school context and contexts beyond the school. This examination of AA indicates the relationship between PE classes and activities beyond school is an area of weakness. For example, are PE educators considering ways in which they may use Game Sense learning to develop transferrable social and teamwork skills in students? By clarifying the role of PE in more generic and transferrable skills, they have the potential to develop the esteem of PE as a curriculum area. By focusing on assessment, AA, and other approaches, PE educators may become more analytical about the teaching and learning in which they are engaged—its objectives, processes, and outcomes.

This paper has been published at a time when PE in Australia is under threat due primarily to the formation of the Australian National Curriculum. Professionals in key learning areas are scrambling to justify the significance of their topic, and naturally assessment is a

key tool. As van der Mars and Harvey (2010) signaled, only with “correct application and alignment of assessment and evaluation for learning will result in; certification, teacher accountability, progression, motivation, diagnosis and curriculum reform” (p. 36). AA has been promoted as best practice in contemporary assessment in the field of PE. However, the comments of teachers interviewed for this study draw into question the effectiveness of the PE literature in informing effective AA. Practice, even in an innovative field such as Game Sense, does not meet some of the criteria for AA outlined by Gulikers et al. (2004). Researchers need to further scrutinize assessment in PE and introduce reforming evidence-based practice so the value of PE may be better understood by, accessed by, and communicated to the wider community.

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