



## Position Statement on Physical Education Assessment

AIESEP is an international, non-governmental, non-profit, professional association which aims to promote high quality research worldwide in the areas of physical education, physical activity and sport pedagogy across the lifespan. AIESEP is multilingual, multicultural and comprises universities, colleges, institutions and individual members from across the globe.

Visit [www.aiesep.org](http://www.aiesep.org) for information.

Please refer to this document as:

AIESEP Position Statement on Physical Education Assessment (2020).  
<https://aiesep.org/scientific-meetings/position-statements/>

## **Preface**

### ***Why a position statement on Assessment in Physical Education?***

The purpose of this AIESEP Position Statement on Assessment in Physical Education (PE) is fourfold:

- To advocate internationally for the importance of assessment practices as central to providing meaningful, relevant and worthwhile physical education;
- To advise the field of PE about assessment-related concepts informed by research and contemporary practice;
- To identify pressing research questions and avenues for new research in the area of PE assessment;
- To provide a supporting rationale for colleagues who wish to apply for research funds to address questions about PE assessment or who have opportunities to work with or influence policy makers.

The main target groups for this position statement are PE teachers, PE pre-service teachers, PE curriculum officers, PE teacher educators, PE researchers, PE administrators and PE policy makers.

### ***How was this position statement created?***

The AIESEP specialist seminar 'Future Directions in PE Assessment' was held from October 18-20 2018, at Fontys University of Applied Sciences in Eindhoven, the Netherlands. The seminar aimed to bring together leading scholars in the field to present and discuss 'evidence-informed' views on various topics around PE assessment. It brought together 71 experts from 20 countries (see appendix 2) to share research on PE assessment via keynote lectures and research presentations and to discuss assessment-related issues in interactive sessions. Input from this meeting informed a first draft version of the statement. This first draft was sent to all participants of the specialist seminar for feedback, from which a second draft was created. This draft was presented at the AIESEP International Conference 2019 in Garden City, New York, after which further feedback was collected from participants both on site and through an online survey. The main contributors to the writing of the position statement are mentioned in appendix 1. Approval was granted by the AIESEP Board on May 7<sup>th</sup>, 2020.

Largely in keeping with the main themes of the AIESEP specialist seminar 'Future Directions in PE Assessment', this Position Statement is divided into the following sections: Assessment Literacy; Accountability & Policy; Instructional Alignment; Assessment for Learning; Physical Education Teacher Education (PETE) and Continuing Professional Development; Digital Technology in PE Assessment. These sections are preceded by a brief overview of research data on PE. The statement concludes with directions for future research.

## Assessment in PE: what do we know from research?<sup>1</sup>

Assessment is a process by which information on student learning is obtained, interpreted and communicated, relative to one or more predefined learning outcomes. It serves several educational purposes, such as:

- Guiding and supporting the learning process of students,
- Informing teachers about the effectiveness of their teaching and curriculum,
- Deciding whether students may progress to a following phase in their learning process or whether a formal qualification (e.g. diploma) can be awarded,
- Providing evidence of student learning for relevant stakeholders (accountability).

These purposes highlight the pivotal role of assessment in assuring high-quality physical education. However, multiple researchers have suggested that assessment quality in PE is worrisome (Hay and Penney 2009; Thorburn 2007; Veal 1988), and that physical educators struggle to meet the demands for a reliable and valid grading system (Annerstedt and Larsson 2010; DinanThompson and Penney 2015). Indeed, assessment has been referred to as 'one of the most fraught and troublesome issues physical educators have had to deal with over the past 40 years or so' (López-Pastor et al. 2013). These concerns coincide with a growing emphasis on assessment in education, due to the increasing global prominence of discourses of accountability and standardisation within education (Hursh 2005; Roberts-Holmes and Bradbury 2016).

Although the subject of assessment in PE has attracted some notable research interest internationally, studies into actual assessment practices are relatively scarce. Most of these studies were relatively small and/or date from more than a decade ago (Desrosiers, GenetVolet, and Godbout 1997; Imwold, Rider, and Johnson 1982; Kneer 1986; Matanin and Tannehill 1994; Mintah 2003; Veal 1988).

Research suggests poor instructional alignment in PE in both Australia and the Netherlands (Georgakis and Wilson 2012; Borghouts, Slingerland and Haerens, 2017). In the USA, Matanin and Tannehill (1994) concluded from their early research with 11 PE teachers, that teachers gained little knowledge about what students accomplished and that they used attendance, dress, participation, and effort to grade students rather than knowledge and skills. More recently, testing an instrument for systematic observation of formal PE assessment, Van der Mars et al. (2018) concluded that the four secondary teachers observed, employed mostly informal assessment strategies and graded student efforts on managerial aspects of performance. Other studies have also noted a predominance of assessment based on the subjective evaluation of aspects such as effort, preparedness, and sportsmanship (Imwold, Rider, and Johnson 1982; Matanin and Tannehill 1994; Veal 1988; Borghouts, Slingerland and Haerens 2017) and a low prevalence of knowledge testing and written assignments (Imwold, Rider, and Johnson 1982; Mintah 2003; Veal 1988; Borghouts, Slingerland and Haerens 2017). A descriptive case study in elementary PE in the USA (James, Griffin, and Dodds 2008) showed teachers shifted their espoused agendas (focus on student learning) to an enacted agenda that focused on safety and completing tasks. As a result of this shift, students were not assessed in the manner that the teachers had planned. Consequently, there was no alignment between the teachers' espoused agenda, lesson tasks, and assessments.

Given the apparent lack of constructive alignment it is not surprising that research has also shown that students may seem confused or ill-informed about PE goals and what its assessment is based on (Erdmann, Chatzopoulos, and Tsormbatzoudis 2006; Redelius and Hay 2012; Zhu 2015). Students in these studies did not perceive the official standards and criteria as the predominant basis for assessment, and their perspectives of grading were inconsistent with their own conception of achievement in PE. Indeed, in a survey including 309 Californian middle school PE teachers, Michael et al. (2016) found that 74% based their assessments on the state physical education standards. Teachers not using standards-based assessments had limited to no professional development

pertaining to the standards and they perceived this as the biggest challenge to using standards-based assessments.

It has been suggested that in PE, there is a high prevalence of product-oriented assessment practices such as fitness testing and the assessment of isolated technical skills (Lorente-Catalán and Kirk 2016; Penney et al. 2009). It has been argued that these forms of assessment lack meaningfulness to students because they do not relate to the world outside the school building (López-Pastor et al. 2013); in other words, they are not authentic. For example, a document analysis of 15 senior secondary physical education courses in Australia, showed that although school-based assessment provided for a variety of tasks to determine student learning, external (third-party) assessment was dominated by written examination (Whittle, Benson and Telford, 2017). Although López-Pastor et al. (2013) have suggested that over the last three decades, more authentic forms of assessment have emerged, their review of assessment practices concluded that it remains to be elucidated to what extent these approaches have become standard practice.

<sup>1</sup>This brief overview of PE-assessment literature is by no means meant to be a complete and all-encompassing review, but rather aims to touch upon some of the most relevant issues in the light of this position statement. For more comprehensive overviews and articles we gladly refer to, among others:

- Hay, P., & Penney, D. (2009). Proposing conditions for assessment efficacy in physical education. *European Physical Education Review*, 15(3), 389–405.
- López-Pastor, V. M., Kirk, D., Lorente-Catalán, E., MacPhail, A., & Macdonald, D. (2013). Alternative assessment in physical education: a review of international literature. *Sport, Education and Society*, 18(1), 57–76.  
<http://doi.org/10.1080/13573322.2012.713860>
- Penney, D., Brooker, R., Hay, P., & Gillespie, L. (2009). Curriculum, pedagogy and assessment: three message systems of schooling and dimensions of quality physical education. *Sport, Education and Society*, 14(4), 421–442.  
<http://doi.org/10.1080/13573320903217125>
- Starck, J. R., Richards, K. A. R., & O’Neil, K. (2018). A Conceptual Framework for Assessment Literacy: Opportunities for Physical Education Teacher Education. *Quest*, 70(4), 519–535. <http://doi.org/10.1080/00336297.2018.1465830>
- Whittle, R. J., Benson, A. C., & Telford, A. (2017). Enrolment, content and assessment: a review of examinable senior secondary (16–19 year olds) physical education courses: an international perspective. *The Curriculum Journal*, 28(4), 598-625.

## Assessment Literacy

Knowledge of assessment quality and efficacy is considered part of 'assessment literacy', which has long been viewed as an important characteristic of effective teachers. Assessment literacy is the set of beliefs, knowledge and practices about assessment that lead a teacher, administrator, policymaker, or students and their families, to use assessment to improve student learning and achievement. Hay and Penney (2013) propose that assessment literacy in PE consists of four inter-dependent elements:

- *assessment comprehension* – focusing on knowledge and understanding of assessment expectations and conditions of efficacy.
- *assessment application* – focusing on the conduct of assessment in terms of either teacher implementation or student engagement.
- *assessment interpretation* – focusing on making sense of and acting on the information that is collected through assessment practices, including traversing and negotiating the social relations of assessment.
- *critical engagement with assessment* – focusing on awareness of the impact or consequences of assessment and challenging the 'naturalness' of assessment practices, performances and outcomes.

Teachers' assessment literacy is an important prerequisite for assessment quality. Assessment quality is paramount for teachers and students to be well informed and be able to make valid judgements about the learning process and its outcomes.

*AIESEP therefore advocates the need for investment in assessment literacy for PE teachers.*

## Accountability & Policy

Accountability has been defined as a (national, or state or provincial) government's mechanism for holding educational institutions to account for the delivery of quality education. As such, it is often viewed that accountability contributes directly to improvements in education, and this view underpins policy. However, some also believe that accountability systems can produce negative impacts on education.

In many countries, assessment data are used as accountability measures. For PE, even more than for most other subjects, this carries the risk of an assessment scope that is either too narrow or lies beyond its sphere of influence as defined by curriculum frameworks. It is important to be aware that assessment can undermine, as well as encourage, learning. Assessment creates and shapes what it measures.

At the same time, in many regions accountability in PE is low. Strong assessment policies, that help to create and implement reliable, valid and authentic ways to assess student learning, will provide opportunities for PE to 'prove its worth'.

*AIESEP advocates for PE to be held accountable for:*

- All students having opportunities to achieve intended learning outcomes and to evidence their learning progress,
- All students receiving feedback and being supported to act on it,
- All students feeling valued and supported as learners in physical education,
- Assessment focusing on equipping students as lifelong participants in physical activity and sport.

*AIESEP believes that:*

- Assessment should be embedded in the local (i.e., national, state, province) PE content standards/objectives.
- PE benefits from strong policies and guidelines on 1) PE goals and purposes and 2) PE assessment. If clear policies and guidelines are in place, PE can be held accountable to provide evidence of student learning toward the goals. This accountability can support quality PE by ensuring alignment between intended learning outcomes, pedagogy and assessment.
- External accountability measures for school PE assessment should reflect equity and inclusiveness of all students. As such, they need to be context-specific, realistic, and appropriate.
- Teachers need a sufficient level of support and autonomy to adapt policies and guidelines to the local context and translate them to the level of students, allowing for equality and inclusiveness.
- Evidence of learning in PE should address individual achievement and learning growth and come from multiple, fine-grained and varied sources and take into account student differences.
- Assessment policy should be informed by research, and its construction should involve practicing teachers, PE scholars, as well as PE's professional organisations.
- There is a need for a broader research base on PE assessment to inform policy.

## Instructional Alignment

Learning should be the goal of physical education, as it is of all education. Physical education is not about playing games or sport, nor is it about simply building fitness or accumulating a minimum amount of physical activity during lessons; the focus should be on purposeful learning. Depending on the cultural and regional context, this learning includes objectives in the psychomotor, cognitive, social and affective domains. These objectives can be reached through various content offerings, for example sport and games, dance, fitness, and/or outdoor pursuits; or a combination thereof. Assessment in physical education should reflect the different domains and contents. Meaningful learning is achieved through teaching that reflects an alignment between intended learning outcomes, assessments that provide evidence of students' progression toward those outcomes, and the instructional practices employed to facilitate students achieving success. In other words, effective teaching should demonstrate a match between what students are intended to know and be able to do, the opportunities they receive to practice and learn, and how we assess their learning progress. In turn, this promotes more worthwhile and meaningful learning for students. The relationship between the three components of instructional alignment is reciprocal. Once it has been identified what students are to achieve (outcomes), it should be determined how they might demonstrate success. All learning cannot, and does not, have to be demonstrated in the same way. Assessing a variety of learning outcomes in different domains, requires a variety of appropriate assessment methods. It is up to the teacher (in consultation with students when appropriate) to provide fitting opportunities for students to demonstrate their success, their mastery, their competence, and their level of achievement. If assessment is to guide and support the learning process, teachers should interact with young people to determine the types of challenges that would hold the most educational value to them or how assessment results might inform students of their strengths and areas needing improvement.

*AIESEP states that:*

- Assessment is an integral part of the instructional process, it is not an add-on. Intended learning outcomes should be derived from the curricular goals. Teachers should develop or employ assessments that are a valid and feasible representation of those intended learning outcomes, in order to periodically determine the students' learning progress (*Assessment of Learning*). They should subsequently design or select learning activities in line with those learning outcomes and integrate assessment activities to support students' learning (*Assessment for Learning*) (see fig. 1).
- To facilitate meaningful and effective learning in PE, teachers should ensure the alignment between learning outcomes, assessment activities and learning tasks within the curriculum.
- AIESEP is committed to finding ways of contributing to, supporting and disseminating an emerging evidentiary base that can inform the design and delivery of high-quality assessment and instructionally aligned PE curricula.

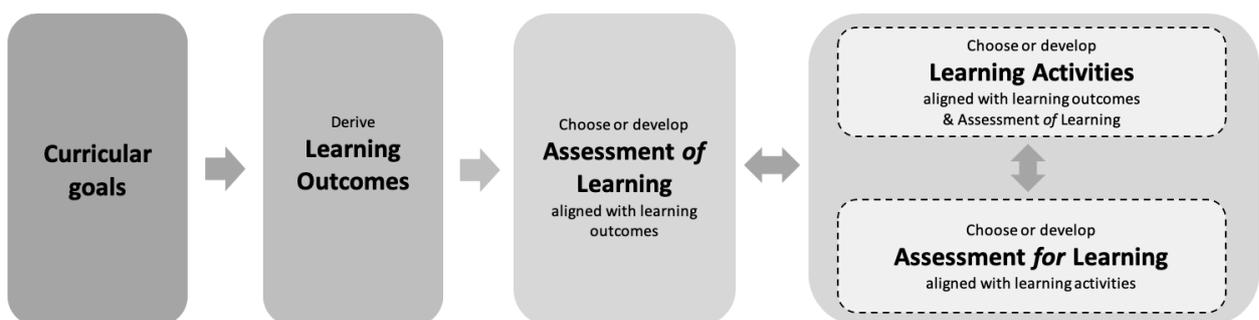


Figure 1: Sequence for the *planning and design* of an instructionally aligned curriculum.

## Assessment for Learning

The terminology and definitions used in the assessment literature varies. Commonly used terms such as summative and formative assessment, or assessment *for* learning, and - *of* learning, have been interpreted differently by different authors and can partly overlap in their descriptions. An assessment task in itself is not *for* or *of* learning; this depends on the manner in which it is used, and when. This also indicates that an assessment can be either *for* or *of* learning to a varying degree. Therefore, rather than providing single definitions, we specify a number of features that characterise opposing positions in the assessment spectrum, based on the assessment literature.

Characteristic	Assessment <i>of</i> Learning	Assessment <i>for</i> Learning
<b>Goal</b>	Deciding on attainment (level, grade, pass/fail, etc.).	Deciding on the next step in the learning process, to support student learning.
<b>Information content</b>	Low on qualitative feedback (e.g. grade).	High on qualitative feedback.
<b>Timing</b>	At the end of a learning unit.	Embedded in the learning process.
<b>Student involvement and self-direction</b>	Usually low.	High.

According to Hattie and Timperley (2007), embedding assessment in the learning process should follow the principles of *feed-up, feedback and feedforward*. These principles pertain to different questions that are of importance in gathering information to support the learning trajectory of the student:

- Feed-up: where is the student going?
- Feedback: where is the student now?
- Feedforward: what should the next steps be?

Ideally, both teachers and learners should be actively involved in strategies that provide answers to these questions; the ultimate goal being for students to become independent and self-regulating learners.

*AIESEP states that:*

- Assessment *for* Learning (AfL) and Assessment *of* Learning (AoL) serve different purposes, and they are not mutually exclusive. However, since AfL is a key for learning focus and goal attainment, purposeful learning in PE should always include (aspects of) AfL.
- Assessment *of* Learning can be used to map student progress or to evaluate curricular and teaching effectiveness. This can aid in legitimising the subject-area within the educational system and society as a whole.
- At the very least, students should know and understand the learning outcomes and quality criteria at the start of their learning process (i.e. assessment transparency). However, in order to achieve optimal learning experiences, students should be actively involved in the assessment process, for example by:
  - o Determining their learning priorities,
  - o Choosing when and how to demonstrate their learning progression,
  - o Having a part in the construction of assessment tasks and/or criteria,
  - o Self- and peer-assessment,
  - o Dialogue with teachers and peers about assessment and its outcomes,
  - o Reflection tasks,
  - o Etc.

It is up to the PE teacher to consider the feasibility and appropriateness of these strategies depending on students' needs, abilities and other contextual aspects. Active involvement in the assessment process can enable learners to feel a greater sense of autonomy and

ownership of their learning. This helps students to become independent learners, and to motivate them for participation in PE and lifelong physical activity.

- More tools, instruments and examples should be developed to aid the implementation of contemporary assessment theory into everyday practice. PE teachers are encouraged to share good practices, as this can accelerate the uptake of innovative assessment approaches.

## **Physical Education Teacher Education (PETE) and Continuing Professional Development**

The extent to which standards and guidelines for assessment in PETE exist, varies widely between local contexts (countries, states, etc.). This is true for both the PE teacher candidates 'learning to assess' and 'being assessed'. Thus, the potential importance and impact of PETE on assessment in PE is two-fold. First, given its pivotal role in assuring high-quality education, (future) PE teachers should develop assessment literacy, and learn to design and implement reliable, valid, authentic, transparent and student-involving assessment. Second, PETE should also be exemplary in how its own teacher candidates are being assessed within the PETE curriculum, taking into account aspects of AfL within a constructively aligned program.

Contributing to, or at least being informed, about new knowledge and practices in PE is regarded as a defining characteristic of an education professional working in the best interests of students. It is therefore of high importance that current insights into effective and meaningful assessment are not only also shared with teacher candidates through PETE programs, but also with professionals within the broader field of PE.

AIESEP states that:

- PETE should allocate a sufficient amount of time to the topic of instructionally aligned assessment for teacher candidates to gain a deep understanding of the role and function of (different forms of) assessment, and for them to learn how to design and implement appropriate, valid, reliable, and feasible assessments of student learning in PE-practice.
- Teacher educators should 'practice what they teach' and aim to be exemplary in their own assessment practices. Therefore:
  - o PETE should strive to embed assessment in the learning process (AfL) throughout the curriculum.
  - o Assessment in PETE should be aligned with its intended learning outcomes and instructional practices.
  - o PETE assessment should include meaningful, authentic tasks (applied in the context of PE), where possible taking place in authentic, real-life learning contexts (e.g. schools).
- Teachers in PETE need support and guidance to establish practices that can effectively extend students' assessment literacy, and thus support them as learners in PE.
- PE teachers have both the right and responsibility to be engaged in effective continuing professional development on PE assessment throughout their careers.

## **Digital Technology in PE Assessment**

It is often claimed that the kind of technological innovation we are dealing with at the moment is revolutionary. In the last two decades, there has been a steady increase in the available (digital) technologies. Potentially, technology can enrich, augment and enhance specific elements of PE. However, for successful use of technology, teachers need a thorough understanding of it, be able to effectively integrate technological skills with content knowledge and pedagogy.

New technologies can potentially have a significant impact on PE assessment. When used appropriately, they can help to improve teachers' observation of students' performance, or the (self) monitoring of students' own progress over time. However, the available technology should never dictate what kind of data are collected, and how this is used for assessment. Technology should be used at the right time and for the right reason. Using technology, the PE profession should measure what we value, instead of valuing what we can measure.

AIESEP states that:

- When using digital technology in PE assessment, it is essential to align the technology with the specific learning outcomes, pedagogy, and assessment tasks.
- PE teachers can and should play an important role in adapting digital technologies to the PE assessment practices, and at the same time be resist letting digital technologies dictate what and how they assess.
- For an effective use of technology in PE assessment, it is important that PE teachers are digitally literate, and possess knowledge of the existence, components, and capabilities of various technologies as they are used in teaching and learning settings.
- PE teachers need to guarantee the protection of the data and the individual's privacy in the process of assessment, especially when using technology for data-collection.

## Directions for future research

AIESEP considers it essential that a formal research agenda be developed aimed at developing an evidence base that can support PE teachers' assessment practices. The following are some examples of relevant research themes around which such an agenda can be built. AIESEP urges researchers to address them collaboratively across international boundaries:

- a. The research-based design, development and implementation of appropriate, effective assessment tools/practices.
- b. The impact of the various assessment strategies on learning outcomes and student motivation.
- c. How assessment informs and impacts teachers' curriculum design and pedagogy.
- d. Effective teacher preparation practices specific to educating pre-service physical educators about assessment in PE.
- e. Effective professional development for in-service teachers addressing assessment in PE.
- f. Communities of practice addressing assessment between PETE faculty, researchers and PE teachers.
- g. The interplay between assessment data of student learning and (the development of) PE policy and enactment.
- h. Student engagement and student voice in the assessment process.
- i. Teachers' and learners' observational and feedback skills and their impact on learning progress.
- j. The use and impact of digital technologies within PE assessment.

## **Dissemination of the AIESEP Position Statement on Physical Education Assessment**

This position statement is intended to reach as many PE teachers, PE pre-service teachers, PE teacher educators, PE researchers, PE administrators and PE policy makers as possible, all over the world.

Therefore, we invite everyone to make an effort to:

- Translate the position statement into your own language (without altering its content). If you wish to contribute to this, please always first contact Lars Borghouts through email: [l.borghouts@fontys.nl](mailto:l.borghouts@fontys.nl).
- Disseminate the position statement to its target groups in your own region through social media, websites, professional journals, PETE-curricula, CPD-programs, etc., referencing its original source: AIESEP Position Statement on Physical Education Assessment (2019). <https://aiesep.org/scientific-meetings/position-statements/>
- Convince your regional physical education societies (professional or scientific) to support and/or adopt the AIESEP Position Statement and help disseminate its content to the aforementioned target groups.

### **Appendices:**

1. Main contributors to the statement
2. Attendants seminar
3. References

## Appendix 1 Main contributors to the AIESEP Position Statement

Lars Borghouts, Fontys University of Applied Sciences, The Netherlands

Menno Slingerland, Fontys University of Applied Sciences, The Netherlands

Gwen Weeldenburg, Fontys University of Applied Sciences, The Netherlands

Ann MacPhail, University of Limerick, Ireland

Hans van der Mars, Arizona State University, U.S.A.

Dawn Penney, Edith Cowan University, Australia

Víctor López Pastor, Universidad de Valladolid, Spain.

Ivo van Hilvoorde, Windesheim University of Applied Sciences, The Netherlands

Peter Iserbyt, KU Leuven, Belgium

Jacalyn Lund, Georgia State University, U.S.A.

## Appendix 2

### Participants AIESEP Specialist Seminar: Future Directions in PE Assessment, held 18-20

October, 2018, Eindhoven, the Netherlands.

<b>Name</b>	<b>First name</b>	<b>Country</b>	<b>Institute</b>
Avşar	Züleyha	Turkey	Uludag University
Bax	Hilde	Netherlands	Hogeschool van Amsterdam
Bertills	Karin	Sweden	Jönköping University
Beukhof	Robbin	Netherlands	Rembrandt College Veenendaal
Borghouts	Lars	Netherlands	Fontys University of Applied Sciences
Bowles	Richard	Ireland	Mary Immaculate College
Brouwer	Berend	Netherlands	SLO
Buyck	Yoann	Switzerland	Université de Genève
Calderón	Antonio	Ireland	University of Limerick
Chambers	Fiona	Ireland	University College Cork
Cloes	Marc	Belgium	University of Liege/AIESEP
Coolkens	Rosalie	Belgium	KU Leuven
Costa	João	Ireland	University College Cork
Dania	Aspasia	Greece	National and Kapodistrian University of Athens
De Martelaer	Kristine	Belgium	VUB en Universiteit Utrecht
Doolittle	Sarah	United States	Adelphi University
Erturan İlker	Gökçe	Turkey	Pamukkale University
Ferro	Nuno	Portugal	SPEF
Freile	Juan	Spain	Universidad Francisco de Vitoria
Gelder, van	Wim	Netherlands	Inholland (PABO)
Gerlach	Erin	Germany	University of Potsdam
Goedhart	Bastiaan	Netherlands	Inholland Haarlem
Grenier	Johanne	Canada	Université du Québec à Montréal
Haapala	Henna	Finland	University of Jyväskylä
Haerens	Leen	Belgium	Ghent University
Hastie	Peter	United States	Auburn University
Hendricks	Philipp	Germany	University of Muenster
Hernán	Emilio José	Spain	University of Valladolid
Herrmann	Christian	Switzerland	DSBG Uni Basel
Hilvoorde, van	Ivo	Netherlands	Hogeschool Windesheim
Hopper	Timothy	Great Britain	University of Victoria
Horrell	Andrew	Great Britain	The University of Edinburgh
Hunuk	Deniz	Turkey	Pamukkale University
Iserbyt	Peter	Belgium	KU Leuven
Koekoek	Jeroen	Netherlands	Windesheim University of Applied Sciences
Krijgsman	Christa	Netherlands	Utrecht University/Sint-Janslyceum
Leirhaug	Petter	Norway	Western Norway University of Applied Sciences

López-Pastor	Víctor M.	Spain	Universidad de Valladolid
Lorente-Catalán	Eloísa	Spain	National Institute of Physical Education of Catalonia- UdL
Lucassen	Jo	Netherlands	KVLO/Mulier Institute
Lund	Jacalyn	United States	Georgia State University
Macken	Suzy	Ireland	Marino Institute of education
MacPhail	Ann	Ireland	University of Limerick
Mars, van der	Hans	United States	Arizona State University
Martin Sanz	Norma Teresa	Spain	Junta de Andalucia - Educación
Mauw	Steven	Netherlands	Hogeschool van Amsterdam
Mombarg	Remo	Netherlands	Hanzehogeschool Groningen
Mooney	Amanda	Australia	Deakin University
Moura	André	Portugal	Fadeup
Munk Svendsen	Annemari	Denmark	University of Southern Denmark
Murphy	Frances	Ireland	Institute of Education DCU
Nobre	Paulo	Portugal	Coimbra University
Okade	Yoshinori	Japan	Nippon Sport Science University
Penney	Dawn	Australia	Edith Cowan University
Puehse	Uwe	Switzerland	DSBG Uni Basel
Redelius	Karin	Sweden	The Swedish School of Sport and Health Sciences
Remmers	Teun	Netherlands	Fontys Sporthogeschool
Romar	Jan-Erik	Finland	Åbo Akademi University
Sanford	Katherine	Canada	University of Victoria
Scanlon	Dylan	Ireland	University of Limerick
Scheuer	Claude	Luxemburg	University of Luxembourg / EUPEA
Schnitzler	Christophe	France	Université of Lille
Seyda	Miriam	Germany	WWU Muenster
Slingerland	Menno	Netherlands	Fontys University of Applied Sciences
Stålman	Cecilia	Sweden	GIH Stockholm
Svennberg	Lena	Sweden	University of Gävle
Tannehill	Deborah	Ireland	University of Limerick
Vidoni	Carla	United States	University of Louisville
Wälti	Marina	Switzerland	University of Basel
Weeldenburg	Gwen	Netherlands	Fontys University of Applied Sciences
Whittle	Rachael	Australia	Victorian Curriculum and Assessment Authority
Wright	Steven	United States	University of New Hampshire

## References

- Annerstedt, C., & Larsson, S. (2010). "I have my own picture of what the demands are: Grading in Swedish PEH - problems of validity, comparability and fairness." *European Physical Education Review* 16 (2): 97–115.
- Borghouts, L. B., Slingerland, M., & Haerens, L. (2017). Assessment quality and practices in secondary PE in the Netherlands. *Physical Education and Sport Pedagogy*, 22(5), 473-489.
- Desrosiers, P., Y. GenetVolet, and P. Godbout. 1997. "Teachers' assessment practices viewed through the instruments used in physical education classes." *Journal of Teaching in Physical Education* 16 (2): 211-28.
- Dinan-Thompson, M., and D. Penney. 2015. "Assessment literacy in primary physical education." *European Physical Education Review* 21 (4): 485-503.
- Erdmann, R., D. Chatzopoulos, and H. Tsormbatzoudis. 2006. "Pupils Grading: Do teachers grade according to the way they report?" *International Journal of Physical Education* 43 (1): 4-10.
- Georgakis, S., and R. Wilson. 2012. "Australian Physical Education and School Sport: An Exploration into Contemporary Assessment." *Asian Journal of Exercise and Sports Science* 9 (1): 37-52.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of educational research*, 77(1), 81-112.
- Hay, P.J., and D. Penney. 2009. "Proposing conditions for assessment efficacy in physical education." *European Physical Education Review* 15 (3): 389-405.
- Hursh, D. 2005. "Neo-liberalism, markets and accountability: Transforming education and undermining democracy in the United States and England." *Policy Futures in Education* 3 (1): 3-15.
- Imwold, C.H., R.A. Rider, and D.J. Johnson. 1982. "The use of evaluation in public school physical education programs." *Journal of Teaching in Physical Education* 2 (1): 13-8.
- James, A., L.L. Griffin, and P. Dodds. 2008. "The relationship between instructional alignment and the ecology of physical education." *Journal of Teaching in Physical Education* 27: 308-326.
- Kneer, M.E. 1986. "Description of physical education instruction theory/practice gap in selected secondary schools." *Journal of Teaching in Physical Education* 5: 91-106.
- López-Pastor, V.M., D. Kirk, E. Lorente-Catalán, A. MacPhail, and D. Macdonald. 2013. "Alternative assessment in physical education: a review of international literature." *Sport, Education and Society* 18 (1): 57-76.
- Lorente-Catalán, E., and D. Kirk. 2016. "Student teachers' understanding and application of assessment for learning during a physical education teacher education course." *European Physical Education Review* 22 (1): 65-81.
- van der Mars, H., Timken, G., & McNamee, J. (2018). Systematic Observation of Formal Assessment of Students by Teachers (SOFAST). *Physical Educator*, 75(3), 341-373.
- Matanin, M., and D. Tannehill. 1994. "Assessment and Grading in Physical Education." *Journal of Teaching in Physical Education* 13 (4): 395-405.
- Michael, R. D., Webster, C., Patterson, D., Laguna, P., & Sherman, C. (2016). Standards-based assessment, grading, and professional development of California middle school physical education teachers. *Journal of Teaching in Physical Education*, 35(3), 277-283.
- Mintah, J.K. 2003. "Authentic assessment in physical education: Prevalence of use and perceived impact on students' self-concept, motivation, and skill achievement." *Measurement in Physical Education and Exercise Science* 7 (3):161-74.
- Penney, D., R. Brooker, P.J. Hay, and L. Gillespie. 2009. "Curriculum, pedagogy and assessment: three message systems of schooling and dimensions of quality physical education." *Sport, Education and Society* 14 (4): 421-42.
- Redelius, K., and P.J. Hay. 2012. "Student views on criterion-referenced assessment and grading in Swedish physical education." *Physical Education and Sport Pedagogy*. 17 (2): 211-25.
- Roberts-Holmes, G. and Bradbury, A. 2016. "Governance, accountability and the datafication of early years education in England." *British Educational Research Journal*. doi:10.1002/berj.3221

- Thorburn, M. 2007. "Achieving conceptual and curriculum coherence in high-stakes school examinations in Physical Education." *Physical Education and Sport Pedagogy* 12 (2): 163-84.
- Veal, M.L. 1988. "Pupil Assessment Perceptions and Practices of Secondary Teachers." *Journal of Teaching in Physical Education* 7 (4): 327-42.
- Whittle, R. J., Benson, A. C., & Telford, A. (2017). Enrolment, content and assessment: a review of examinable senior secondary (16–19 year olds) physical education courses: an international perspective. *The Curriculum Journal*, 28(4), 598-625.
- Zhu, X. 2015. "Student perspectives of grading in physical education." *European Physical Education Review* 21 (4): 409-420.