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## Implementing formative assessment in primary physical education: teacher perspectives and experiences

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*Background:* Incorporating assessment as a regular practice can enhance teaching and learning in primary physical education. However, there is little evidence to suggest primary teachers use assessment strategies regularly in their physical education classes. *Purpose:* To explore the impact of incorporating assessment into primary teachers' physical education practices on (a) their perspectives on assessment and (b) teaching and learning in primary physical education.

*Methodology:* Primary teachers in Limerick ( $n = 2$ ) and Dublin ( $n = 3$ ) participated in initial focus group interviews exploring practices and understandings of assessment in physical education. Each teacher then planned and delivered a series of lessons where assessment was considered in relation to the learning intentions. Their experiences were captured using reflective journals (Limerick) and a mid-point focus group interview (Dublin). Both groups of teachers participated in a third focus group interview after lessons were completed. Qualitative analysis by both researchers involved individual coding of the data using the constant comparison method followed by conversations on alignment of findings. Trustworthiness of the data was addressed using peer debriefing techniques.

*Findings:* The inclusion of assessment in physical education lessons provided structure and focus to the planning, teaching and learning processes and impacted positively on both teacher learning and the children's learning. The assessment strategies focused the learners, allowed for feedback related to assessment criteria and informed future planning. Challenges for the teachers included the amount of time needed to plan, difficulty in accessing sample assessments and differentiating assessments for different class levels and abilities.

*Conclusion:* The use of assessment strategies enhanced the quality of teaching and learning in physical education and impacted positively on the teachers' and learners' perceptions of physical education. The importance of supporting teachers, through provision of information on assessment strategies and samples of assessment strategies aligned with content in physical education to enhance their everyday practice, is highlighted.

**Keywords:** primary/elementary; physical education; assessment; formative

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## Introduction

### *Assessment in the primary school*

Assessment is defined as ‘the process of gathering, recording, interpreting, using and reporting information about a child’s progress and achievements in developing knowledge, skills and attitudes’ (National Council for Curriculum and Assessment (NCCA) 2007, 7). Assessment has become central to efforts which seek to impact and improve on children’s learning in schools (Elwood 2006) and specifically in primary school contexts (Conner 1999; Wragg 2001). Assessment involves a variety of practices ranging from formative to summative assessment techniques which include consideration of *Assessment for Learning* (AfL) and *Assessment of Learning* (AoL) (Black 2005; Black et al. 2003; Cousins et al. 2004). AfL can occur at all stages of the learning process where a teacher uses evidence on an ongoing basis to support teaching and learning. AoL is often separate from the teaching and learning process and falls within a measurement paradigm which focuses on more formal external examinations (Torrance and Pryer 1998). Formative assessment is defined as ‘frequent, interactive assessments of student progress and understanding to identify learning needs and adjust teaching appropriately’ (Centre for Educational Research and Innovation (CERI) 2005, 21). This paper includes consideration of a range of formative assessment strategies (including some aspects of AfL) selected and used by primary teachers during their physical education classes.

Primary schools in Ireland are required to have an assessment policy in order to record and report children’s progress (Education Act 1998). The Irish Primary School Curriculum (1999) recognises that assessment is an integral part of the teaching and learning process that can help identify *what* the child is learning as well as *how* the child is learning (Government of Ireland 1999a). Within an Irish context, a combination of formative and summative assessment, using a wide range of assessment strategies, is recommended at the primary level (NCCA 2007) with specific guidelines provided on the use of teacher observation, teacher designed tasks and curriculum profiles in physical education (Government of Ireland 1999a, 1999b). However, reviews of overall primary curriculum implementation (NCCA 2005, 2008) highlight that teachers have difficulty finding time to assess in an ‘overloaded’ curriculum and have particular difficulty assessing in some practical areas. The NCCA (2007) published detailed guidelines on assessment to support primary teachers which highlight the importance of using a range of assessment strategies. The extent to which Irish primary teachers are using the guidelines is unclear at present. Although these guidelines were distributed to schools, there has been no formal national follow-up initiative to support the continuing professional development of teachers to use these guidelines in their teaching. This seems to reflect Hall and Kavanagh’s (2002) criticism that the current curriculum assessment policy has been too reliant on both teacher knowledge of and teacher willingness to use good assessment procedures without the radical programme of teacher development required to sustain it.

### *Assessment in physical education*

Assessment is recognised as a key part of the teaching and learning cycle in physical education contexts (Frapwell 2010; Lund 1992; Matanin and Tannehill 1994; Melograno 1997; Rink 1993; Siedentop and Tannehill 2000; Wright and Van Der Mars 2004). Assessment in physical education can be used as a measure of accountability whereby children, parents, colleagues and other members of society are informed as to the appropriateness and effectiveness of an education programme or unit of work (Bailey 2001). Hay (2006) emphasises the interdependence of assessment, curriculum and pedagogy where evaluation and

analysis of the rate and level of children's learning in physical education can help to inform and make future teaching more effective, thus creating learning experiences that are more valuable for children (Pickup and Price 2007; Piotrowski 2000). In this way, assessment helps guide teachers in their instruction so that they can adjust their planning to see what the children need to learn (Wright and Van Der Mars 2004). Frapwell (2010) emphasises the importance of placing the learner at the centre of the assessment process and the assessment providing a view of the whole child. The use of assessment strategies can make learning more enjoyable and challenging for the children (Hopple 2005; Schiemer 2000) and can enhance learner motivation (Brooks and Brooks 1993). Cassady, Clarke, and Latham (2004) emphasise the role of evaluation in increasing students' awareness of their own learning and progress. They highlight the importance of including children in decision-making around the assessment process to ensure it is a positive and worthwhile experience.

Physical education contexts can, however, provide particular assessment challenges for teachers. These include the difficulties of assessing learning in the affective domain, measuring effort and judging actions and incidences which by their very nature are transitory and fleeting (Bailey 2001; Piotrowski 2000). Morgan and Hansen (2007) highlight lack of content knowledge as a further significant barrier to primary teachers assessing in physical education. Locke and Graber (2008) outline that some areas such as motor skill learning and physical activity levels are easier to assess than other learning areas and emphasise the necessity of teacher expertise to use a range of assessment strategies effectively. Plant (2007) concurs that many practitioners get assessment 'horribly wrong' in physical education by focusing on summative assessments only at the end of a unit of work which focuses solely on the child's ability to perfect a skill, e.g. the ability to perform a forward roll proficiently. Johnson (2008) highlights the difficulties that can arise when teachers make subjective judgements relating to attendance, effort and attitude in lessons with poor use of assessment criteria which tell little about the student's learning. These studies suggest that teachers need a detailed framework for learning and progression in physical education, which contains key achievement indicators in various areas of children's development in physical education (Piotrowski 2000).

Assessment strategies in physical education have received unprecedented attention in the past decade (Frapwell 2010; Locke and Graber 2008). Policy developers, teachers and researchers have developed a range of assessment strategies to support teachers' AoL in physical education (Schiemer 2000). These strategies include the use of rubrics and standardised tests that are largely linked to programme evaluation and to some national standards (Frapwell 2010; National Association for Sport and Physical Education 2004; Schiemer 2000). Locke and Graber (2008) suggest that the ultimate impacts of these developments are yet unknown. While the evidence of the impact of formative assessment strategies to enhance learning is overwhelming (Black and Wiliam 1998; Wiliam et al. 2004), research on the impact of formative assessment in physical education is relatively limited (Hay 2006). Research on the impact of assessment strategies in a post-primary physical education context suggests that use of formative assessment strategies can impact positively on teaching and learning in physical education (Hay 2006; MacPhail and Halbert 2010).

The level of engagement of primary teachers with assessment strategies and the effectiveness of these strategies are largely unknown. Rink et al. (2007) found that teachers were supportive and engaged positively with an assessment initiative in physical education which was linked to state standards in the USA. Rink et al.'s findings, like many assessment initiatives, were linked to an accountability agenda (Hay 2006). Morgan and Hansen (2007) suggest that primary teachers find assessment the most difficult aspect of their role and the

area in which they felt least competent. They found that primary teachers feared that the imposition of assessment in physical education would force undesired accountability, turning physical education into something negative that would be perceived as ‘work’. A combination of these factors resulted in assessment in primary physical education being avoided. These teachers also suggested that they would need extensive support and guidance to learn how to assess effectively in physical education.

In Ireland, physical education is taught by generalist primary teachers who undertake either a BEd or postgraduate diploma in primary teaching. The physical education component of the programmes consists of 30–48 h of small group teaching with emphasis on the content knowledge and pedagogical content knowledge through practical engagement. Assessment strategies, specific to physical education, are addressed within these programmes. Despite this, there is little evidence to suggest that assessment strategies are widely used in primary school physical education in Ireland. Research has highlighted the importance of addressing assessment practices with teachers in pre-service contexts (Karp and Woods 2008) and in teacher development contexts (Patton and Griffin 2008). This study explored the experiences of primary teachers using formative assessment to enhance teaching and learning in their physical education classes. This paper examines the benefits and challenges experienced by these teachers when they used assessment in primary physical education contexts and considers the support needed to facilitate and encourage the regular use of assessment in primary physical education.

## Methods

### *Research context and participants*

Ethical approval for the study was obtained from the Research Ethics Committee in St Margaret’s College (pseudonym). Each teacher volunteered to participate in the study and written informed consent was obtained. A convenient sample of five female generalist primary teachers, who were involved in taught (Dublin,  $n = 3$ ) and research-based (Limerick,  $n = 2$ ) postgraduate studies in physical education, participated in this study. It is important to acknowledge that the views and experiences of the sample reflect a cohort of primary teachers who have a high level of knowledge and motivation towards the subject which may not reflect the general population.

Initial focus group interviews sought to provide descriptive information on the teachers and physical education within their school context. The teachers were all less than 40 years of age and had teaching experience ranging from 1 to 14 years. Four of the teachers were teaching in urban city settings and one was based in a small town. The teachers were based in mixed- and single-gender schools and taught in a range of classes from junior infants to sixth class (5–12 years approximately). All five teachers were based in schools that were supportive of physical education and where physical education was taught regularly. Planning in physical education was for the most part left to the individual teacher and, where school physical education plans existed, they were not regularly consulted. The teachers in this study all strived to deliver a broad and balanced curriculum. However, reflecting national trends, teachers were most comfortable delivering the games strand (Fahey, Delaney, and Gannon 2005; MacPhail, O’Sullivan, and Halbert 2008; Woods et al. 2010). All the teachers reported that the children in their classes looked forward to participating in physical education lessons. The teachers described how formal assessment within their schools included formal literacy and numeracy tests, maths and spelling tests on a Friday and an end of year report. The teachers described how they were involved in

informal assessment on a regular basis within their own classes where they would 'jot down notes'. They were aware that much of their work did include assessment: 'I think we had been doing it all along but it wasn't written down in a folder as assessment or people didn't notice it as much . . . I just think it's becoming more formalised' (T4, interview 1).

They viewed 'finding the gaps' (T2, interview 1) as the main purpose of assessment. Although they suggested that assessment should be reported to parents, the children themselves, other teachers and the principal, this did not always occur in practice. Assessment in physical education was based primarily on teacher observation of 'he can do it/she can't do it' related to skill learning. Some of the teachers described 'jotting down notes' (T1, interview 1) at the end of physical education classes. In terms of end of year reports, the teachers all tick a physical education box and this normally concerns whether a child participated or not in class: 'I know from just chatting to various teachers and in the reports it would just be "do they participate?" and that would kind of be it' (T5, interview 1).

### **Data collection**

Initial focus group interviews (interview 1) were conducted with both the Limerick and the Dublin groups to capture their physical education and school contexts and to explore practices and understandings of assessment in physical education. Interview 1 included a combination of descriptive questions to access the general background of each teacher and school and open-ended questions (Creswell 2009). Areas addressed in open-ended questions included whole school and class policies regarding the teaching of physical education, general assessment practices in the school and individual class and practices and perspectives of assessment in physical education. Each interview lasted 1–1.5 h and took place in a setting convenient to participants (a school in one case and a college in the other). Focus group interviews were chosen as the topic lent itself to a discussion within a small group format to support rich and varied data (Flick 2002) and allowed participants to highlight issues that they deemed important. Emphasis was placed on joint construction of meaning (Bryman 2008; Kvale and Brinkmann 2009).

Each teacher then planned and delivered a series of lessons (approximately six to eight lessons) based on the Primary Schools' Sports Initiative (PSSI) lesson plans which are support materials aligned with the content of the Irish primary physical education curriculum. For each lesson, the teachers selected written/verbal assessment strategies, including teacher-led, peer and self-assessment strategies, aligned with content to examine different aspects of the children's learning (see the Appendix). All the teachers did not use all the strategies. Teachers in the study were not directed or prescribed to use any particular assessment strategies. Use of technology was not employed to support assessment strategies. Their decisions were supported by their study of physical education within their postgraduate programme which included examination of exemplars and sample assessment tools for physical education. For example, teacher 5 (T5) used conferencing and journaling with her class (age 9–10 approximately) where this would not have been appropriate for teacher 2 (T2) who was teaching children age 5–6 years. A member of the research team acted as a contact support to both the Dublin and Limerick teachers to advise them on the application of selected tools. All teachers were encouraged by the support contact to share the learning intention and the criteria for success using the WALT (We are learning to . . .) and WILF (What I'm looking for . . .) framework (NCCA 2007) in relation to each lesson.

The two teachers involved in research-based postgraduate studies recorded their experiences in a reflective journal format through responding to a series of prompt questions including: What went well and why?, What would you do differently and why? and Did the

assessment make a difference to teaching and learning? It was intended that the journal would prompt reflection on the process of using assessment in their teaching (Spalding and Wilson 2002) as well as capturing their experiences in a developmental way from their perspective. The three teachers involved in taught postgraduate studies did not complete a reflective journal. This decision was made by the research team as it was felt inappropriate to increase the workload of these teachers, taking into account the other requirements of the participants' taught postgraduate programme. Instead, a mid-point focus group interview (interview 2) was used to capture their experiences in an effort to address this gap and provide insight into the teachers' experiences. In this mid-point focus group, the participants were prompted to consider the successes and drawbacks of using the assessment strategies as well as the impact on teaching and learning. The reflective journal data provided immediacy to the experience as the journals were completed directly after each lesson was taught. Therefore, the journals provided a richness and depth that was not evident in the mid-point interview. While it would be desirable for all teachers to have completed a journal during the process, the experiences of the two teachers who did complete the journals provide us with valuable detail and insight. The study may have been strengthened through the use of field observations to provide further insight on teachers' perspectives. All teachers participated in a final focus group interview (interview 3) after the lessons were completed.

### ***Data analysis***

Focus group and reflective journal data were organised and analysed qualitatively through reading and rereading using constant comparison (Miles and Huberman 1994). As a first step, the researchers individually read through of all the interviews and noted main ideas being discussed and emphasised by participants (Creswell 2009). By unitising the data through an initial coding process (Charmaz 2006), chunks or units of meaning began to emerge (Lincoln and Guba 1985). Following more focused incident coding, codes were combined and compared and a list of main categories was compiled (Charmaz 2006). Each transcript was re-examined by both researchers individually against these ideas and compared across transcripts to examine similarities and differences. Key ideas within each of these categories were aligned with the research questions to support construction of the argument. The reflective journals of the two Limerick participants were then examined. This allowed for triangulation of themes from the focus group data as well as providing further insight and illustration of these themes. Aspects present in the reflective journals but not evident in the focus group interviews were also considered, though findings were in the most part consistent. Trustworthiness of the data was addressed using peer debriefing techniques. This involved two other members of the overall project team in independent analysis of a portion of the pre- and post-focus group interview data alongside the reflective journal entries following the same procedures as the main researchers. These researchers had no access to the findings of the two main researchers and presented their findings to the overall research team on the same day as the two main researchers presented their findings. The overall research team explored and discussed the two sets of findings. While the findings were similar, this conversation provided an opportunity to explore, challenge and extend interpretations within the data.

### **Findings and discussion**

The teachers' experiences of using planned and structured assessments are presented below and the key benefits and challenges are discussed in relation to: (1) Overall impact, (2)

Teacher learning, (3) Structure and focus for planning, teaching and learning, (4) Supporting teachers' future engagement with assessment. The implications of their experiences are considered in relation to factors that might serve to facilitate and encourage the regular use of assessment and impact on the successful use of assessment to support the learning process in primary physical education.

### **Overall impact**

At the beginning of the study, the teachers had a clear understanding of why assessment formed an important part of their teaching practice. The teachers were open to the possibilities of using more formal assessment strategies in physical education. They suggested that using assessment more in physical education might help others to 'take PE more seriously' (T5, interview 1). This, they suggested, may impact positively on the status of the subject by allowing for acknowledgement of learning achievement, particularly for less academic children. The one caveat that teachers placed on this process was that the use of assessment should not lead to the fun being taken out of physical education classes (Morgan and Hansen 2007): 'but if it got too formal it might hinder and take the fun out of it and it's difficult to find a happy medium' (T4, interview 1). Another teacher questioned 'are we going to put too much weight on it? We want them all to take part and we want them all to have fun' (T1, interview 1).

The implementation of structured assessment strategies enhanced the quality of teaching in physical education (Patton and Griffin 2008; Rink et al. 2007) and the children's experiences and their learning: 'The children loved it' (T5, interview 3). The use of assessment focused the children on learning in physical education and included the children in the learning process (Cousins et al. 2004; James, Griffin, and France 2005; Patton and Griffin 2008). By making the learning in physical education explicit, the status of physical education was enhanced from the learner's perspective. One teacher noted that 'PE wasn't going out for the craic, you know, it was a subject' (T4, interview 3). This awareness of the educational value of the subject and a sense of ownership in lessons as a result of assessment is encouraging and resonates with other literature in the area (MacPhail and Halbert 2010).

### **Teacher learning**

The process of engagement with structured assessments in physical education was very positive for teachers and learners and led some of the teachers to question their previous practices in physical education: 'I learned so much . . . I kind of thought, before, jeppers what was I doing when I was teaching PE, was I not taking all this in?' (T4, interview 3). As the teachers engaged with the process of using planned, structured assessments in their physical education classes they found themselves using a greater variety of methodologies, planning in more detail and reflecting on completed lessons: 'I saw my own mistakes and things for myself to improve upon in my own pedagogical practice' (T5, interview 3). Another teacher highlighted what the children taught them through the process: 'Their learning but our learning too from them. I am definitely more aware of it now than I was' (T3, interview 3). This aligns with evidence of teacher learning through engagement with assessment suggested elsewhere in physical education contexts (James, Griffin, and France 2005; MacPhail and Halbert 2010; Patton and Griffin 2008; Rink et al. 2007). Teacher learning is considered below in relation to (a) knowledge of assessment, (b) knowledge of physical education and (c) knowledge of the learner.

*Knowledge of assessment*

Knowledge of assessment strategies is essential to effective use of these strategies to enhance teaching and learning (Black and Wiliam 1998; Black et al. 2003; Wragg 2001). The teacher's awareness and knowledge of assessment in this study were greatly enhanced by using a variety of assessment strategies. As the teachers used new strategies and saw their impact on the children's learning, they recognised the value of using a variety of strategies as advocated in the physical education curriculum (Government of Ireland 1999b): 'I was questioning before, and even when I did the questioning this time it wasn't great compared to other things ... I would put it at the bottom of the pile now as opposed to before I'd say, sure I'll use questioning' (T4, interview 3). However, while questioning was reportedly used on a weekly basis, assessments involving the children in recording and peer assessment were less apparent. Such strategies were not effective if used too often or in consecutive lessons as the children grew tired of them. The teachers quickly realised the importance of not trying to do too much in one lesson and the importance of keeping it simple: 'I was trying to do too many assessments and I was too involved in paperwork, with filling out pages and I was totally disengaged from the children ... so I scrapped that ... you can't do it every week' (T5, interview 3). The teachers suggested that their increased knowledge of assessment and their recognition of its value to enhance learning would impact on their practice in other curricular areas also: 'I think you'll carry it over, I definitely will now to other subjects' (T1, interview 3). This recognition of the transferability of learning suggests that subject-specific practices may enhance teacher practices across other curricular areas.

*Knowledge of physical education*

The teachers found that their physical education content knowledge improved through constructing assessment strategies and using them with the children: 'I got really quick at assessing and, you know, I think because of that as well I actually knew my content an awful lot better' (T5, interview 3). The teachers recognised the importance of knowing the physical education content and progressions to support skill learning and development. One teacher described how, as a result of using assessment, she is better equipped to support children's learning:

I am knowledgeable of this subject area, therefore I can immediately see the difficulties or areas of improvements to be made. This affects your teaching ... improves feedback for the children. It impacts on a children's learning .... (T4, interview 3)

The key role of content knowledge in supporting assessment practices in physical education is supported elsewhere in the literature (James, Griffin, and France 2005; MacPhail and Halbert 2010; Rink et al. 2007). This implies that content knowledge should be a fundamental consideration for any initiative intending to use assessment as a lever to enhance teaching and learning.

*Knowledge of the learner*

The use of assessment strategies provided insight into the learners and their learning. One teacher described how using a checklist helped her to diagnose difficulties and support some children during an athletics lesson:

... it drew my attention to the kids who really were struggling. The kids who were flying over the high jump no problem ... but the kids who wouldn't, ... you could actually notice the kids

... it made you stop the whole lesson so you could, like for the javelin, let's walk it through, you know, step over, step over, plant, throw. (T3, interview 3)

The use of assessment strategies provided feedback to the teacher on the children's learning and also supported a process of reflection related to future planning:

I really gained an insight into how the children felt about the lesson and their learning during the conferencing. This will certainly influence my teaching of future lessons. (T5, reflection 5)

Some teachers also found that the assessment strategies opened up new avenues for dialogue with the children, impacting positively on their relationship with the children as well as on the effectiveness on their teaching. Peer and self-assessments brought other issues to light that are also important for successful learning. Such issues include teamwork and co-operation: 'these enhance my own awareness of other hidden issues (i.e. hidden curriculum) that have a role to play in dictating if lessons are successful or not' (T4, reflection 4). The teachers became more aware of grouping children appropriately to work together, how children interacted with each other and how this impacted on learning. It seems that using the assessment strategies had the effect of 'slowing down time' (T4, reflection 6) for the teacher and allowing them to engage in a meaningful way with the children to support their learning. This concept of assessment providing an important view of the whole learner is supported by the literature (Carroll 1994; Frapwell 2010; Government of Ireland 1999b).

### ***Structure and focus for planning, teaching and learning***

The assessment strategies provided structure and focus to the planning process that enhanced the quality of teaching by providing a framework for the learning process:

I had a clear plan and knew the content of my lesson well. I knew how and when I was assessing. I had clear easy to use criteria for the assessment. I had a good flow to the lesson as I knew the content well and had notes taken. (T4, reflection 4)

A heightened sense of awareness during lessons was also apparent: 'You were very aware of their movement, whereas you may have just said "let's give this a go" beforehand ... you definitely zone in' (T2, interview 3). Patton and Griffin (2008) also found that use of assessment strategies promoted an alignment between planning, instruction and assessment. The structure provided by assessment strategies is considered below in relation to (a) focus for the learners, (b) feedback for learners and the teacher and (c) peer learning.

### ***Focus for the learners***

One can't teach everything in one lesson so assessment really helped to clarify and focus teaching. (T4, reflection 3)

Making links between the learning intentions and assessment strategies provided structure and focus for the teacher at the planning stage: 'I identified the objectives (WALT) and what my intentions were, that really helped me' (T2, interview 3). This clarification of learning intentions is viewed as central to effective assessment (Bailey 2001; NCCA 2007, 2008; Piotrowski 2000). As a result of devising assessment strategies and planning their role within individual physical education lessons, the teachers found that their lessons

became more structured. The teachers emphasised the value of sharing WALT and WILF with the children for each lesson before leaving the classroom to move to the activity space: ‘They were well aware of what was going to come up and what the lesson was all about’ (T1, interview 3). They found that this enhanced learning by helping to establish a strong learning focus from the beginning of each lesson. Clarity of focus ensured that the teacher utilised all opportunities to enhance learning and used the time available effectively. One teacher described how sharing the learning intention impacted on the children’s effort levels by providing a framework for their learning: ‘They know they are going to have a check (assessment) at the end of the lesson so they generally want to do well in the check and do their best . . .’ (T4, reflection 5). The children seemed to be more motivated as they wanted to reach targets and show improvement in assessment tasks (Siedentop and Tannehill 2000). MacPhail and Halbert (2010) concur that students are more appreciative of the learning process and enjoy having targets to aim toward when learning goals are shared. The use of assessment also provided benchmarks for the children to evaluate their own performance: ‘They were aware of their own levels, their own limitations, I actually felt they were being very honest’ (T1, interview 3). This provides further evidence of the value of having a clear focus with assessment criteria determined at the planning stage and the importance of sharing these criteria with the children.

#### *Feedback for the learners and the teacher*

Providing feedback to the learner to enhance learning is a key aspect of formative assessment strategies (Conner 1999; Cousins et al. 2004; Elwood 2006; Rink and Hall 2008; Siedentop and Tannehill 2000). Sharing assessment criteria using WILF (What I am looking for) allowed the teachers to give relevant feedback consistently to the children in their class, resulting in assessment that ‘ensured fairness, equal judgements and equal assessment’ (T4, reflection 3). One of the teachers described how initially giving feedback consumed her full attention:

It was even funny yesterday, how we were out on the green and one of the other older teachers was there with his class and I’d say four times in the space of about thirty seconds ‘great ball’, ‘great ball’, ‘great ball’. And I was kind of going: all I had in my head was ‘great ball’ but there’s so much more going on here than just ‘great ball!’ . . . (T3, interview 2)

As the lessons progressed, each teacher’s feedback gradually became more specific and targeted certain aspects of the children’s learning more explicitly:

. . . structuring the observation using a checklist really focused my feedback to the children and improved the quality of feedback. I was able to give them very specific areas where they were doing well and areas that they needed to improve on. (T5, reflection 6)

These comments highlight the effectiveness of the assessment strategies used and the teachers developing skill to use assessment criteria to diagnose difficulties and support learning.

The teachers emphasised the critical role of reflection on practice as a means to enhance teaching by allowing the teacher to evaluate learning against established criteria and providing feedback to inform future planning: ‘my class won’t be as haphazard’ (T2, interview 3). This underlines the importance of providing teachers with time and space to plan and reflect on past lessons. The teachers emphasised the importance of recording and reflecting on assessment after each lesson, highlighting the busy reality of the primary school context:

'The one thing is the time, if you don't get it written down, forget it' (T3, interview 3). These teachers advised: 'If you just get into the routine of it, like in the end, we were doing it naturally and we weren't taking on anything new' (T1, interview 3).

### *Peer learning*

Teachers realised the importance of including a variety of different assessment strategies. Peer assessment in particular engaged the older children with the WILF associated with the learning intention and ensured they were involved and invested in the learning (Patton and Griffin 2008). Peer assessment also seemed to provide particular opportunities for the children to interact socially with each other:

Using the star and the card I just thought that it had a big bearing on behaviour and kids working together and bringing on the weaker child in a group setting even though I said nothing about group activity one of the things they said afterwards that they could have been better at the group or they could have been more help and that came from them and not from me so they were aware. (T1, interview 2)

The teachers suggested that it was important to be aware of how children spoke to each other: 'They found it tough because they didn't want to offend anyone and they were tip-toeing around. Then you've the other guy who's completely blunt, d'you know? So it, that was a dicey one I think to actually attempt' (T3, interview 3). Bailey (2001) asserts that while peer assessment does offer an interesting way of gathering evidence, the skills required to do so are not naturally developed in children. Some of the teachers encountered difficulties when using peer assessment: 'It gets complicated and particularly for those weaker kids, the brighter kids have it straight away, but the weaker ones ...' (T3, interview 3). This highlights the importance of giving explicit guidance on how peer assessment works and the importance of modelling the feedback process involved in peer assessment beforehand.

Some of the teachers found themselves challenged to adapt the assessment strategies to their context to meet the needs of the children in their classes, particularly in the infant context: 'I found it very restricted because they [*infants*] can't read as such and they can't write' (T2, interview 3). The teachers of the junior classes found that using groups of observers rather than individual peers to guide each other worked best. This highlights the importance of provided differentiated examples of assessment for the infant classes and the importance of designing a variety of strategies for use specifically in infant contexts.

### ***How can we support teachers to use assessment in physical education?***

Overall, the experience of using assessment strategies seems to have enhanced the learning in physical education and also changed how this learning happens. One teacher described how she hopes using assessment strategies has changed the dynamic of future physical education experiences:

I kind of would hope that ... when we go back and use assessment again that they would, take more of the responsibility ... it would be easier for me to give them tasks that they could do and take responsibility for themselves and therefore shift the balance ... instead of looking at me for, you know, everything ... even all the fun that we're going to have, you know, that it wouldn't be all, sort of, coming from me. (T1, interview 3)

These teachers suggested that, as found elsewhere (NCCA 2008), lack of support and information materials to guide the design of assessment strategies for physical education was the biggest obstacle to future use of assessment where there is still ‘a big gap between the knowledge and the practice and filling that gap was very, very difficult to do’ (T5, interview 3). This reflects Black’s (2005) suggestion that if an assessment system is ill-designed or misunderstood, then teachers’ reactions may indeed be hostile. These teachers acknowledged that their level of commitment might not be possible or reasonable to expect of many primary teachers where ‘so much paperwork is being imposed on teachers now. I don’t know how far I’d go into researching different things if I didn’t *have* to do it’ (T2, interview 3). Despite the challenges faced around planning, these teachers were convinced of the merits of using assessment in physical education: ‘I’m amazed to think that I actually really feel so strongly now that somebody needs to do something about this’ (T4, interview 3). The solution in their view was: ‘the “magic book” based on the Irish curriculum . . . that it’s suitable and gives you more ideas’ (T4, interview 3). Morgan and Hansen (2007) also found that teachers emphasised the need for supports to enhance knowledge of assessment in physical education. The teachers suggested that sample strategies, aligned with lesson content and differentiated by class level, would assist greatly in supporting teachers to use assessment in physical education: ‘. . . if you have a framework you will . . . add to it and you will adjust it to suit yourself and suit your own class’ (T5, interview 3). The teachers also felt that the support materials should be easy to use: ‘handouts like that would be very easy for somebody to say “right, I’ll give this a go” and don’t demand huge preparation’ (T1, interview 3). This evidence suggests that using assessment is both feasible and desirable to enhance learning in physical education but teachers must be provided with guidance and support materials (Patton and Griffin 2008; Rink et al. 2007). Furthermore, the commitment of these teachers to using assessment as a regular element of their physical education practices suggests that assessment may provide a means to impact positively on the status of physical education by making the learning explicit.

### Conclusion and implications

The use of structured planned assessment strategies in primary physical education provided a framework that enhanced teaching and learning. The use of assessment strategies was a positive experience for both the teachers and the children in their classes by providing a structure that made learning explicit and allowed learning to be acknowledged. Teachers’ perspectives on assessment changed dramatically as the value of assessment in enhancing the learning process was recognised. As a result of using assessment strategies, the teachers believed that the children learned more in their physical education classes and that they themselves became better teachers of physical education. This recognition can enhance teaching and learning in other subject areas also through the application of assessment strategies. The impact of enhanced knowledge of assessment across other subject areas would be worth exploring further. In order to address teachers’ knowledge and practices in assessment in physical education, more emphasis should be placed on assessment practices and provision of sample assessment tools in physical education during initial teacher education. Following on from this, teachers need to be supported to apply assessment strategies in physical education through continuing professional development.

Assessment helped focus both the teacher and the children on the specific learning intentions of the lesson, provided feedback on progress to the teacher and the learners and supported future planning. This study was framed from the perspective of the teacher. Exploration of the learners’ perspective on the assessment process in enhancing

their learning and experiences of physical education merits further attention. In addition, case studies of teachers using specified tools with different age groups of children would be of value to inform future practices. This could provide evidence of the link between assessment practices and children's learning and support the development of resource materials including assessment samples in physical education. The use of assessment strategies not only provided a structure that enhanced teaching and learning, but made that learning explicit to the teacher and learners in a way that suggests assessment may provide a pathway to enhance both the participants' perspectives on their physical education experiences as well as the practices of physical education in primary schools.

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## Appendix

*Assessment wheel*: A simple self-assessment tool that supports the learner to assess their own progress, record their own learning, consider gaps and plan future learning in conversation with the teacher (JCPE 2006).

*Smiley face assessment* 😊😊😞: A simple form of self-assessment where children rate their achievement in relation to a particular task by indicating which face applies to them.

*Thumbs-up/down* 👍👎: A simple form of self-assessment where children indicate their understanding or level of achievement by signaling with their hands.

*Two wishes and a star* ✨✨☆: A simple form of self-assessment where children consider what they already know (star) and things they would still like to learn/practice more of (wishes).

*Think, share, pair, square*: A group-based assessment where pairs share their understandings and then combine their ideas with another pair (square) to extend their understanding.

*Questioning*: A form of assessment that underpins all other assessment methods that can be teacher-led or directed by the children (NCCA 2007).

*Observation*: Teacher or peer observation involves observation of activity using checklists, rubrics and rating scales (Hopple 2005).

*Teacher-designed tasks*: Oral, written or performance-based tasks developed by the teacher. Performance on the task is compared with predetermined criteria as a measure of learning.

*Journaling*: Children write in a journal after each lesson to support reflection upon their thoughts, feelings, impressions, perceptions and attitudes about their performances, events, tasks or other learning experiences (Siedentop and Tannehill 2000).

*Conferencing*: Involves the teacher (and/or other parties concerned with the child's learning) and the child having an informal conversation regarding the child's progress in a particular area of learning (NCCA 2007). This conversation can be supported by records from other assessment tools.