

1 **Title:** Implementing formative assessment in primary physical education: teacher  
2 perspectives and experiences

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22 **Abstract**

23 **Background:** Incorporating assessment as a regular practice can enhance teaching and  
24 learning in primary physical education (James, Griffin & France, 2005). However, there is  
25 little evidence to suggest primary teachers use assessment strategies regularly in their  
26 physical education classes (Morgan & Hansen, 2007).

27 **Purpose:** To explore the impact of incorporating assessment into primary teachers' physical  
28 education practices on (a) their perspectives on assessment and (b) teaching and learning in  
29 primary physical education.

30 **Methodology:** Primary teachers in Limerick (n=2) and Dublin (n=3) participated in initial  
31 focus group interviews exploring practices and understandings of assessment in physical  
32 education. Each teacher then planned and delivered a series of lessons where assessment was  
33 considered in relation to the learning intentions. Their experiences were captured using  
34 reflective journals (Limerick) and a mid-point focus group interview (Dublin). Both groups  
35 of teachers participated in a third focus group interview after lessons were completed.  
36 Qualitative analysis by both researchers involved individual coding of the data using the  
37 constant comparison method (Miles & Huberman, 1994) followed by conversations on  
38 alignment of findings. Trustworthiness of the data was addressed using peer debriefing  
39 techniques.

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

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

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52 **Keywords:** Primary/ elementary; physical education; assessment; formative

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70 **Summary for practitioners**

71 This study explored the impact of assessment on teaching and learning in primary physical  
72 education. Five generalist primary teachers selected and implemented a range of formative  
73 assessment strategies with their classes in physical education. Data collection involved focus  
74 group interviews and reflective journals. Including assessment in physical education lessons  
75 provided structure and focus to the planning, teaching and learning processes and impacted  
76 positively on both teacher learning and the children's learning. The assessment strategies  
77 focused the learners, allowed for feedback related to assessment criteria and informed future  
78 planning. Challenges for the teachers included the amount of time needed to plan, difficulty  
79 in accessing sample assessments and differentiating assessments for different class levels and  
80 abilities. This study highlighted the importance of supporting teachers through provision of  
81 information on assessment strategies and samples of assessment strategies aligned with  
82 content in physical education to enhance their everyday practice.

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95 **Background**

96 *Assessment in the Primary school*

97 Assessment is defined as “the process of gathering, recording, interpreting, using and  
98 reporting information about a child’s progress and achievements in developing knowledge,  
99 skills and attitudes” (National Council for Curriculum and Assessment (NCCA, 2007: 7).  
100 Assessment has become central to efforts which seek to impact and improve on children’s  
101 learning in schools (Elwood, 2006) and specifically in primary school contexts (Conner,  
102 1999, Wragg, 2001). Assessment involves a variety of practices ranging from formative to  
103 summative assessment techniques which include consideration of *Assessment for Learning*  
104 (AfL) and *Assessment of Learning* (AoL) (Black, 2005; Black, Harrison, Lee, Marshall &  
105 Wiliam, 2003; Cousins, Bruttriss, Callander & Rouse, 2004). AfL can occur at all stages of  
106 the learning process where a teacher uses evidence on an ongoing basis to support teaching  
107 and learning. AoL is often separate from the teaching and learning process and falls within a  
108 measurement paradigm which focuses on more formal external examinations (Torrance &  
109 Pryer, 1998). Formative assessment is defined as ‘frequent, interactive assessments of student  
110 progress and understanding to identify learning needs and adjust teaching appropriately’  
111 (Centre for Educational Research and Innovation (CERI), 2005: 21). This paper includes  
112 consideration of a range of formative assessment strategies (including some aspects of AfL)  
113 selected and used by primary teachers during their physical education classes.

114

115 Primary schools in Ireland are required to have an assessment policy in order to record and  
116 report children’s progress (Education Act, 1998). The Irish Primary School Curriculum  
117 (1999) recognises that assessment is an integral part of the teaching and learning process that  
118 can help identify what the child is learning as well as how the child is learning (Government  
119 of Ireland, 1999a). Within an Irish context a combination of formative and summative

120 assessment, using a wide range of assessment strategies, is recommended at the primary level  
121 (NCCA, 2007) with specific guidelines provided on the use of teacher observation, teacher  
122 designed tasks and curriculum profiles in physical education (Government of Ireland, 1999a,  
123 Government of Ireland, 1999b). However, reviews of overall primary curriculum  
124 implementation (NCCA, 2005; NCCA, 2008) highlight that teachers have difficulty finding  
125 time to assess in an ‘overloaded’ curriculum and have particular difficulty assessing in some  
126 practical areas. The NCCA (2007) published detailed guidelines on assessment to support  
127 primary teachers which highlight the importance of using a range of assessment strategies.  
128 The extent to which Irish primary teachers are using the guidelines is unclear at present.  
129 Although these guidelines were distributed to schools, there has been no formal national  
130 follow up initiative to support the continuing professional development of teachers to use  
131 these guidelines in their teaching. This seems to reflect Hall’s and Kavanagh’s (2002)  
132 criticism that the current curriculum assessment policy has been too reliant on both teacher  
133 knowledge of and teacher willingness to use good assessment procedures without a radical  
134 programme of teacher development required to sustain it.

135

### 136 *Assessment in Physical Education*

137 Assessment is recognised as a key part of the teaching and learning cycle in physical  
138 education contexts (Frapwell, 2010; Lund, 1992; Matanin & Tannehill, 1994; Melograno,  
139 1997; Rink, 1993; Siedentop & Tannehill, 2000; Wright & Van Der Mars, 2004). Assessment  
140 in physical education can be used as a measure of accountability whereby children, parents,  
141 colleagues and other members of society are informed as to the appropriateness and  
142 effectiveness of an education programme or unit of work (Bailey, 2001). Hay (2006)  
143 emphasises the interdependence of assessment, curriculum and pedagogy where evaluation  
144 and analysis of the rate and level of children’s learning in physical education can help to

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

156

157 Physical education contexts can, however, provide particular assessment challenges for  
158 teachers. These include the difficulties of assessing learning in the affective domain,  
159 measuring effort and judging actions and incidences which by their very nature are transitory  
160 and fleeting (Bailey, 2001; Piotrowski, 2000). Morgan & Hansen (2007) highlight lack of  
161 content knowledge as a further significant barrier to primary teachers assessing in physical  
162 education. Locke and Graber (2008) outline that some areas such as motor skill learning and  
163 physical activity levels are easier to assess than other learning areas and emphasise the  
164 necessity of teacher expertise to use a range of assessment strategies effectively. Plant (2007)  
165 concurs that many practitioners get assessment 'horribly wrong' in physical education by  
166 focusing on summative assessments only at the end of a unit of work which focuses solely on  
167 the child's ability to a perfect a skill e.g. the ability to perform a forward roll proficiently.  
168 Johnson (2008) highlights the difficulties that can arise when teachers make subjective  
169 judgements relating to attendance, effort and attitude in lessons with poor use of assessment

170 criteria which tell little about the student's learning. These studies suggest that teachers need  
171 a detailed framework for learning and progression in physical education, which contains key  
172 achievement indicators in various areas of children's development in physical education  
173 (Piotrowski, 2000).

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

189

190 The level of engagement of primary teachers with assessment strategies and the effectiveness  
191 of these strategies is largely unknown. Rink, et al. (2007) found teachers were supportive and  
192 engaged positively with an assessment initiative in physical education which was linked to  
193 state standards in the USA. Rink et al.'s findings, like many assessment initiatives, were  
194 linked to an accountability agenda (Hay, 2006). Morgan & Hansen (2007) suggest that



195 primary teachers find assessment the most difficult aspect of their role and the area in which  
196 they felt least competent. They found that primary teachers feared that the imposition of  
197 assessment in physical education would force undesired accountability turning physical  
198 education into something negative that would be perceived as ‘work’. A combination of these  
199 factors resulted in assessment in primary physical education being avoided. These teachers  
200 also suggested that they would need extensive support and guidance to learn how to assess  
201 effectively in physical education.

202

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

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220 **Methods**

221 *Research Context and Participants*

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

230

231 Initial focus group interviews sought to provide descriptive information on the teachers and  
232 physical education within their school context. The teachers were all less than forty years of  
233 age and had teaching experience ranging from one to fourteen years. Four of the teachers  
234 were teaching in urban city settings and one was based in a small town. The teachers were  
235 based in mixed and single gender schools and taught in a range of classes from junior infants  
236 to sixth class (5-12 years approximately). All five teachers were based in schools that were  
237 supportive of physical education and where physical education was taught regularly. Planning  
238 in physical education was for the most part left to the individual teacher and, where school  
239 physical education plans existed, they were not regularly consulted. The teachers in this study  
240 all strived to deliver a broad and balanced curriculum. However, reflecting national trends,  
241 teachers were most comfortable delivering the games strand (Fahey *et al.*, 2005, MacPhail *et*  
242 *al.*, 2008, Woods *et al.*, 2010). All the teachers reported that the children in their classes  
243 looked forward to participating in physical education lessons. The teachers described how

244 formal assessment within their schools included formal literacy and numeracy tests, maths  
245 and spelling tests on a Friday and an end of year report. The teachers described how they  
246 were involved in informal assessment on a regular basis within their own classes where they  
247 would ‘jot down notes’. They were aware that much of their work did include assessment: ‘I  
248 think we had been doing it all along but it wasn’t written down in a folder as assessment or  
249 people didn’t notice it as much... I just think it’s becoming more formalised’ (T4 - interview  
250 1).

251

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

261

## 262 *Data Collection*

263 Initial focus group interviews (interview 1) were conducted with both the Limerick and the  
264 Dublin groups to capture their physical education and school contexts and to explore  
265 practices and understandings of assessment in physical education. Interview 1 included a  
266 combination of descriptive questions to access general background of each teacher and school

267 and open-ended questions (Creswell, 2009). Areas addressed in open ended questions  
268 included whole school and class policies regarding the teaching of physical education,  
269 general assessment practices in the school and individual class and practices and perspectives  
270 of assessment in physical education. Each interview lasted 1-1 1/2 hours and took place in a  
271 setting convenient to participants (a school in one case and a college in the other). Focus  
272 group interviews were chosen as the topic lent itself to a discussion within a small group  
273 format to support rich and varied data (Flick, 2002) and allowed participants to highlight  
274 issues that they deemed important. Emphasis was placed on joint construction of meaning  
275 (Bryman, 2008; Kvale & Brinkmann, 2009).

276

277 Each teacher then planned and delivered a series of lessons (approximately 6-8 lessons) based  
278 on the Primary Schools' Sports Initiative (PSSI) lesson plans which are support materials  
279 aligned with the content of the Irish primary physical education curriculum. For each lesson  
280 the teachers selected written/ verbal assessment strategies, including teacher-led, peer and  
281 self-assessment strategies, aligned with content to examine different aspects of the children's  
282 learning (Appendix 1). All the teachers did not use all the strategies. Teachers in the study  
283 were not directed or prescribed to use any particular assessment strategies. Use of technology  
284 was not employed to support assessment strategies. Their decisions were supported by their  
285 study of physical education within their postgraduate programme which included  
286 examination of exemplars and sample assessment tools for physical education. For example  
287 teacher 5 (T5) used conferencing and journaling with her class (age 9-10 approximately)  
288 where this would not have been appropriate for teacher 2 (T2) who was teaching children age  
289 5-6 years. A member of the research team acted as a contact support to both the Dublin and  
290 Limerick teachers to advise them on the application of selected tools. All teachers were  
291 encouraged by the support contact to share the learning intention and the criteria for success

292 using the WALT (We are learning to...) and WILF (What I'm looking for...) framework  
293 (NCCA, 2007) in relation to each lesson.

294

295 The two teachers involved in research-based postgraduate studies recorded their experiences  
296 in a reflective journal format through responding to a series of prompt questions including:  
297 What went well and why?, What would you do differently and why? and Did the assessment  
298 make a difference to teaching and learning? It was intended that the journal would prompt  
299 reflection on the process of using assessment in their teaching (Spalding and Wilson, 2002)  
300 as well as capturing their experiences in a developmental way from their perspective. The  
301 three teachers involved in taught post-graduate studies did not complete a reflective journal.  
302 This decision was made by the research team as it was felt inappropriate to increase the  
303 workload of these teachers, taking into account the other requirements of the participants'  
304 taught post-graduate programme. Instead, a mid-point focus group interview (interview 2)  
305 was used to capture their experiences in an effort to address this gap and provide insight into  
306 the teachers' experiences. In this mid-point focus group the participants were prompted to  
307 consider the successes and drawbacks of using the assessment strategies as well as the impact  
308 on teaching and learning. The reflective journal data provided immediacy to the experience as  
309 the journals were completed directly after each lesson was taught. Therefore, the journals  
310 provided a richness and depth that was not evident in the mid-point interview. While it would  
311 be desirable for all teachers to have completed a journal during the process, the experiences  
312 of the two teachers who did complete the journals provide us with a valuable detail and  
313 insight. The study may have been strengthened through the use of field observations to  
314 provide further insight on teachers' perspectives. All teachers participated in a final focus  
315 group interview (interview 3) after the lessons were completed.

316

317 *Data analysis*

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

341 **Findings and Discussion**

342 The teachers' experiences of using planned and structured assessments are presented below  
343 and the key benefits and challenges are discussed in relation to 1. Overall impact 2. Teacher  
344 learning 3. Structure and focus for planning, teaching and learning 4. Supporting teacher's  
345 future engagement with assessment. The implications of their experiences are considered in  
346 relation to factors that might serve to facilitate and encourage regular use of assessment and  
347 impact on the successful use of assessment to support the learning process in primary  
348 physical education.

349

350 ***1. Overall impact***

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

363

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

374

## 375 ***2. Teacher Learning***

376 The process of engagement with structured assessments in physical education was very  
377 positive for teachers and learners and led some of the teachers to question their previous  
378 practices in physical education: 'I learned so much...I kind of thought, before, jeeppers what  
379 was I doing when I was teaching PE, was I not taking all this in?' (T4 – interview 3). As the  
380 teachers engaged with the process of using planned, structured assessments in their physical  
381 education classes they found themselves using a greater variety of methodologies, planning in  
382 more detail and reflecting on completed lessons: 'I saw my own mistakes and things for  
383 myself to improve upon in my own pedagogical practice' (T5 – interview 3). Another teacher  
384 highlighted what the children taught them through the process: 'Their learning but our  
385 learning too from them. I am definitely more aware of it now than I was' (T3 – interview 3)  
386 This aligns with evidence of teacher learning through engagement with assessment suggested  
387 elsewhere in physical education contexts (James *et al.*, 2005; MacPhail & Halbert, 2010;



388 Patton & Griffin, 2008; Rink *et al.*, 2007). Teacher learning is considered below in relation to  
389 a) knowledge of assessment and b) knowledge of physical education c) knowledge of the  
390 learner.

391

### 392 *A) Knowledge of assessment*

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

411 3). This recognition of the transferability of learning suggests that subject-specific practices  
412 may enhance teacher practices across other curricular areas.

413

414 ***B) Knowledge of physical education***

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

422

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

426

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

431

432 ***C) Knowledge of the learner***

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

436

437 '...it drew my attention to the kids who really were struggling. The kids who were flying  
438 over the high jump no problem...but the kids who wouldn't, ...you could actually notice  
439 the kids... it made you stop the whole lesson so you could, like for the javelin, let's walk  
440 it through, you know, step over, step over, plant, throw' (T3 - interview 3).

441

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

444

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

448

449 Some teachers also found that the assessment strategies opened up new avenues for dialogue  
450 with the children, impacting positively on their relationship with the children as well as on  
451 the effectiveness on their teaching. Peer and self assessments brought other issues to light that  
452 are also important for successful learning. Such issues include teamwork and co-operation  
453 'these enhance my own awareness of other hidden issues (i.e. hidden curriculum) that have a  
454 role to play in dictating if lessons are successful or not' (T4 – reflection 4 ). The teachers  
455 became more aware of grouping children appropriately to work together, how children  
456 interacted with each other and how this impacted on learning. It seems that using the  
457 assessment strategies had the effect of 'slowing down time' (T4 – reflection 6) for the teacher  
458 and allowing them to engage in a meaningful way with the children to support their learning.

459 This concept of assessment providing an important view of the whole learner is supported by  
460 the literature (Carroll, 1994; Frapwell, 2010; Government of Ireland, 1999b).

461

### 462 ***3. Structure and focus for planning, teaching and learning***

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

465

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

469

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

476

#### 477 ***A) Focus for the learners***

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

480

481 Making links between the learning intentions and assessment strategies provided structure  
482 and focus for the teacher at the planning stage: 'I identified the objectives (WALT) and what  
483 my intentions were, that really helped me' (T2 - interview 3). This clarification of learning

484 intentions is viewed as central to effective assessment (Bailey, 2001; NCCA, 2007; NCCA,  
485 2008; Piotrowski, 2000). As a result of devising assessment strategies and planning their role  
486 within individual physical education lessons, the teachers found that their lessons became  
487 more structured. The teachers emphasised the value of sharing WALT and WILF with the  
488 children for each lesson before leaving the classroom to move to the activity space: ‘They  
489 were well aware of what was going to come up and what the lesson was all about’ (T1 -  
490 interview 3). They found that this enhanced learning by helping to establish a strong learning  
491 focus from the beginning of each lesson. Clarity of focus ensured that the teacher utilised all  
492 opportunities to enhance learning and used the time available effectively. One teacher  
493 described how sharing the learning intention impacted on the children’s effort levels by  
494 providing a framework for their learning: ‘They know they are going to have a check  
495 (assessment) at the end of the lesson so they generally want to do well in the check and do  
496 their best...’ (T4 – reflection 5). The children seemed to be more motivated as they wanted to  
497 reach targets and show improvement in assessment tasks (Siedentop & Tannehill, 2000).  
498 MacPhail and Halbert (2010) concur that students are more appreciative of the learning  
499 process and enjoy having targets to aim toward when learning goals are shared. The use of  
500 assessment also provided benchmarks for the children to evaluate their own performance:  
501 ‘They were aware of their own levels, their own limitations, I actually felt they were being  
502 very honest’ (T1 - interview 3). This provides further evidence of the value of having a clear  
503 focus with assessment criteria determined at the planning stage and the importance of sharing  
504 these criteria with the children.

505

### 506 ***B) Feedback for the learners and the teacher***

507 Providing feedback to the learner to enhance learning is a key aspect of formative assessment  
508 strategies (Conner, 1999; Cousins *et al.*, 2004; Elwood, 2006; Rink & Hall, 2008; Siedentop

509 & Tannehill, 2000). Sharing assessment criteria using WILF (What I am looking for) allowed  
510 the teachers to give relevant feedback consistently to the children in their class resulting in  
511 assessment that ‘ensured fairness, equal judgements and equal assessment’ (T4 – reflection  
512 3). One of the teachers described how initially giving feedback consumed her full attention:

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

518

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

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

525

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

528 The teachers emphasised the critical role of reflection on practice as a means to enhancing  
529 teaching by allowing the teacher to evaluate learning against established criteria and provided  
530 feedback to inform future planning: ‘my class won’t be as haphazard’ (T2 - interview 3).

531 This underlines the importance of providing teachers with time and space to plan and reflect

532 on past lessons. The teachers emphasised the importance of recording and reflecting on  
533 assessment after each lesson highlighting the busy reality of the primary school context: ‘The  
534 one thing is the time, if you don’t get it written down, forget it’ (T3 - interview 3). These  
535 teachers advised: ‘If you just get into the routine of it, like in the end, we were doing it  
536 naturally and we weren’t taking on anything new’ (T1 - interview 3).

537

### 538 *C) Peer learning*

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

544

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

550

551 The teachers suggested that it was important to be aware of how children spoke to each other:  
552 ‘They found it tough because they didn’t want to offend anyone and they were tiptoeing  
553 around. Then you’ve the other guy who’s completely blunt, d’you know? So it, that was a  
554 dicey one I think to actually attempt’ (T3 - interview 3). Bailey (2001) asserts that while peer  
555 assessment does offer an interesting way of gathering evidence, the skills required to do so  
556 are not naturally developed in children. Some of the teachers encountered difficulties when

557 using peer assessment: ‘It gets complicated and particularly for those weaker kids, the  
558 brighter kids have it straight away, but the weaker ones....’ (T3 - interview 3). This highlights  
559 the importance of giving explicit guidance on how peer assessment works and the importance  
560 of modelling the feedback process involved in peer assessment beforehand.

561

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

569

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

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

575

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

581



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

607 may provide a means to impact positively on the status of physical education by making the  
608 learning explicit.

609

610

### 611 **Conclusion and implications**

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

627

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

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

640

641

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796 **Appendix 1**

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

800 **Smiley face assessment ☺☹☺:** A simple form of self-assessment where children rate their  
801 achievement in relation to a particular task by indicating which face applies to them

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

804 **2 wishes and a star ✨✨☆:** A simple form of self-assessment where children consider what  
805 they already know (star) and things they would still like to learn/ practice more of (wishes)

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

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

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

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

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

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