

**Sport Wales
PESS and PLPS Case Study**

**Educating 21st Century
Learners:**

***‘Digital technology and
physical education’
An enhanced pedagogy?***

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Key Points

- *Educating 21st Century Learners explores the impact on learner literacy of a pedagogical approach that uses digital and mobile technology in innovative ways.*
- *Using digital technology to consolidate literacy outcomes through PE heightened engagement in learning and provided opportunities for less active learners to engage in PE.*
- *This case study highlights how the use of technology can improve learner engagement across subjects through practical application and reflective practice opportunities.*

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Context

Physical literacy is a holistic concept which can be described as the 'motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life.' (Whitehead, 2014). A growing body of evidence strongly suggests that physical literacy not only allows children and young people to fulfil their physical potential, but also improves attention, concentration, engagement and on-task behaviour. This ensures children and young people are 'available to learn' and have the potential to achieve better outcomes through physical, cognitive and affective development. Physical literacy is unique to each individual and considered fundamental for a child and young person's health and wellbeing as well as playing a key role in facilitating academic achievement.

In 2000 a Welsh task force outlined a number of key actions required to improve standards of PE across Wales. As a result the PE and School Sport (PESS) Programme was set up and managed by Sport Wales (funded by the Welsh Government in 2001) and continued until 2014. The primary aim for the programme was to ensure that 'every young person is challenged and supported in PE and school sport'. PESS focused on up skilling the practitioners. High quality provision across curricular, extracurricular and community activity helps to engage children and young people, providing them with positive activity experiences and the skills, confidence and motivation to be 'hooked on sport' for life. The PESS project has developed a suite of professional development courses and resources to support practitioners working with 3 to 19-year-olds (Foundation Phase to Key Stage 4 and above).

Delivery was managed and supported by expert regional consortia teams with an understanding of physical literacy and the ways in which it can be achieved and improved through the curriculum and the wider community. PESS interventions investigated the potential value of using the physical to create and enhance meaningful learning and improve academic achievement through movement. This approach allowed for the creation and development of bespoke, holistic and child-centred interventions driven by need (as opposed to a 'one-size fits all' approach). Dragon Multi-Skills and Play to Learn developed wide reaching and extensive activities which were used as facilitative vehicles, accepting that the stage of development was more important than age.

The bespoke evolutionary nature of PESS has provided an excellent foundation for the new Physical Literacy Programme for Schools (PLPS). The primary focus of PLPS is to create engaging opportunities that meet the needs of every child, helping them to fulfil their full potential.

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Context (Cont.....)

In conjunction with the PLPS a newly developed Physical Literacy Framework (PLF) will provide practitioners with clear expectations that will help track the progress of every child along their physical literacy journey. The implementation of the PLF across Wales will raise the importance of developing a physically literate nation. However, the need to independently collate, review, analyse and evaluate the PESS evidence base and the introductory phase of the PLPS in raising standards across physical literacy, academic achievement and whole school outcomes is paramount.

SPEAR

In October 2014, the Centre for Sport, Physical Education and Activity Research (SPEAR) at Canterbury Christ Church University was commissioned by Sport Wales to independently review the evidence base for the Physical Education and School Sport Programme (PESS), the Physical Literacy Programme for Schools (PLPS) and the Physical Literacy Framework (PLF). Part of this independent review involves the collation, review, selection, secondary analysis and innovative presentation of case studies evidencing and sharing a range of best practice across PESS and PLPS initiatives. As such, the narrative and analysis of this case study has been conducted by SPEAR with the resources provided by Sport Wales. Consent to identify children, adults and organisations within this case study has been granted.

SPEAR is a cross school and cross faculty research centre at Canterbury Christ Church University established to bring together expertise across and outside the university and to facilitate collaborative working. In particular, SPEAR brings together expertise in Sport and Exercise Science, Physical Education, Education, Health and Tourism and Leisure. SPEAR's research has helped guide and inform public policy to increase physical activity and sport participation among young people by identifying the processes most successful in increasing participation. It has provided a rationale for government investment, contributed to the wider evidence base used by policy makers, and steered programme improvements that enhance physical activity opportunities and experiences.

More details on SPEAR and its work can be found at:

www.canterbury.ac.uk/SPEAR

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‘Digital technology and physical education’ A enhanced pedagogy?

Profile

Technology is an integral part of the lives of children and young people in the 21st century. The rapid development of technology in the last two decades has provided educators with an opportunity to create new, interactive and innovative teaching and learning strategies. With the emergence of wireless and mobile technology, educators are increasingly using digital technology in PE and school sport (Thompson, 2008). Hybrid or blended models of learning are being used in PE and school sport to provide supplementary web-based content in addition to face-to-face activity-based sessions (National Association for Sport and Physical Education, 2007). Examples of web-based content include social media and apps, webinars, and question and answer support outside of the academic day.

One of the challenges for today’s educators is how best to embrace digital technology to engage learners in education and in particular here, to engage them in PE and school sport. The use of technology within PE to support cross curricular and cross departmental learning has the potential to improve understanding and the application of theory in a practical setting. A further consideration is whether the use of technology through PE and school sport can improve the academic attainment of learners in other subject areas.

The flexibility of the PESS programme enabled innovative educators and schools to couple physical development with digital technology to enhance the learning experiences of children and young people. This case study follows the journey of Abertilley Comprehensive School using iPads in PE lessons to improve outcomes in physical education and literacy.

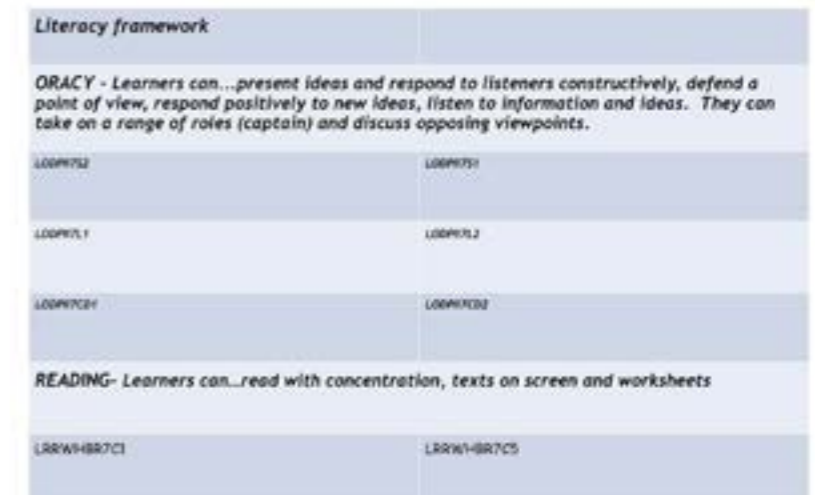
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The Challenge: What was the problem?

The PE department at Abertilley Comprehensive School felt that their contribution to the National Literacy Framework had been a tick box exercise;

‘Our contribution looked pretty thin!’

Collectively PE teachers and the head of department believed they had not maximised the impact of PE, school sport and ICT on the literacy of learners. It was recognised, for example, that developing oracy requires learners to develop and present ideas and information; this was second nature in PE and school sport sessions at the school but cross curricular links had not been exploited to reinforce consistent messages to develop oracy. Teachers recognised the constraints of some teaching styles associated with PE on the development of reading skills (the ability to locate, select and use information and the ability to respond to what has been read) and writing skills (the ability to organise ideas and information and write accurately). PE and school sport tended to be associated with more authoritative teaching styles and opportunities for learners to write during PE lessons were almost non-existent. The PE department had tried using booklets, record of achievement sheets and had even purchased schemes of work supporting cross curricular links. However, Abertilley Comprehensive School felt they needed to implement something that was simple yet effective during PE lessons to consolidate cross curricular learning. Given the rapid evolution and accessibility of technology (in particular mobile devices and apps) the school decided to explore the use of iPad apps in PE to improve the literacy levels of learners, in particular boys from year 7 and 8, without losing practical time.



Literacy framework	
ORACY - Learners can...present ideas and respond to listeners constructively, defend a point of view, respond positively to new ideas, listen to information and ideas. They can take on a range of roles (captain) and discuss opposing viewpoints.	
LOOPW2	LOOPW1
LOOPW1	LOOPW2
LOOPW2	LOOPW1
READING- Learners can...read with concentration, texts on screen and worksheets	
LRRW1-8R7C1	LRRW1-8R7C5

Sample of the National Literacy Framework

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The Intervention: What did they do?

The head of department, Nick, lead the project, gathering ideas on the use of digital technology and apps in PE and producing an action plan. An iPads in PE course was delivered through PESS to 28 teachers in March 2014 and the training provided an opportunity for the PE community to share thoughts and ideas. Nick then created and delivered a training day to disseminate information to all staff within the PE department. One member of staff was released from timetabled obligations in order to produce a set of resources for the department to use with iPads and apps. The scheme of work developed was shared and presented to all teachers in the PE and english departments through the Keynote app for iOS. This allowed presentations and other work to be shared between computers and mobile devices such as iPads, iPhones and laptops. Each of the sessions were planned to achieve relevant literacy and PE outcomes with the use of technology. Learners had the opportunity to write about what they had learnt in lessons and to check their understanding of topics and keywords covered. Videos were recorded during sessions and uploaded to Edmodo (educational software for teachers, parents and learners that enables interaction and discussion). Learners used Edmodo to chat with their teacher, critically appraise their own performance and identify areas of improvement. The software also facilitated questions and answers, conversations and observation of performance. Lesson stimuli were provided to create discussion points and to focus on key words through sporting actions and teachers supported learners with 'wordfotos' and 'wordsalads' highlighting key words to improve learner oracy.



Examples of the Edmodo chat software used to interact with the teacher and learners outside of class time and scheme of work that was shared with staff using the keynote app

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Impact: What changed for the young people?

While it was challenging to measure the direct impact of the use of technology on academic outcomes, improvements in learners' literacy have been observed and the PE engagement of boys involved in the intervention has markedly improved. The boys are eager to learn and their enjoyment of using technology during and outside of the school day has encouraged out of hours learning. The use of technology also engaged those learners who were deemed to be less active and less engaged in PE and school sport. The integration of digital technology with PE and literacy enabled less active learners to demonstrate their understanding and knowledge through the written word, rather than through performing actions in front of the class. Teachers also observed improved levels of confidence and self-esteem amongst the learners involved.



Examples of the lesson stimulus comic life resources and wordsalad/foto used to engage the learners

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Impact: What changed for Abertilley Comprehensive School?

The school will continue to improve and develop the keynote scheme of work providing more quality opportunities for learners to learn, understand and apply their knowledge. PE sessions, where possible, will continuously interlink with the oracy, reading and writing strands of the National Literacy Framework. Video analysis as a medium for homework, allowing learners to respond to writing and other stimuli, has been embedded across the curriculum. The use of iPads has been expanded, allowing the learner to gather video evidence for a written review (in which they create their own wordsalad or wordfoto) which has also been integrated into the curriculum.

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Recommendations: Advice for schools and practitioners



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