

**Sport Wales  
PESS and PLPS Case Study**

**Closing the Gap:**

***'Aqua Dragons'  
Tackling poverty and  
disadvantage in boys  
through physical literacy***

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**Closing the Gap**

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**Key Points**

- *'Closing the Gap' tracks the progress of boys from Herbert Thompson Primary and Michaelston Community College engaged in an innovative initiative to support physical, academic, social and personal development.*
- *With training and support from teachers and a PESS trainer, young leaders were able to provide a bespoke, child-centred and innovative initiative, closing the attainment gap between boys from more and less advantaged backgrounds.*
- *This case study highlights how strong inter-school partnerships coupled with training young leaders and empowering learners can help tackle educational differences caused by poverty.*

# Closing the Gap

## 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.

# Closing the Gap

## 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](http://www.canterbury.ac.uk/SPEAR)

# Closing the Gap

## *'Aqua Dragons' Tackling poverty and disadvantage in boys through physical literacy*

### Profile

At least one-third of children in Wales (around 200,000) are affected by poverty with nearly 15% living in severe poverty; the highest proportion of any UK nation (Save the Children Cymru Conference, 2013). Poverty has a profound impact on the likelihood of children and young people experiencing educational and life successes. By the age of three, there is a noticeable gap in cognitive performance between those children in the poorest section of society compared to those from more advantaged backgrounds (Goodman and Greg, 2010). As children progress through the education system the attainment gap widens, with learners eligible for Free School Meals (FSM), a proxy for low income, falling behind learners not eligible for FSM at every Key Stage. Children and young people growing up in poverty are more likely to have poorer health outcomes, lower aspirations and skills leading to lower paid jobs, an increased likelihood of becoming not in education, employment or training ('NEET') and dependant on the welfare system (Welsh Government Monitor, 2011). Further confounding the longstanding issues associated with socio-economic status and academic attainment is the gap emerging between girls and boys in the learning environment, with girls generally outperforming boys in overall school success (Vantieghem et al. 2014; Martinez et al. 2012). Boys may therefore require particular attention and support to fulfil their potential. The Welsh Government has stated its commitment to eradicating child poverty by 2020 and redressing the gender imbalance in educational attainment (Child Poverty Strategy for Wales 2010; Child Poverty Strategy Progress Report 2013; Closing the gap between boys' and girls' attainment in schools report, Estyn, 2008). Schools can play a fundamental role in raising the academic attainment of children and young people who are growing up in poverty, and in providing a positive ethos that allows these learners to achieve their full potential (Keane, 2012). To effectively tackle poverty and close the gender gap in challenging areas, schools and educational professionals must employ a range of innovative, engaging and effective pedagogical strategies.

# Closing the Gap

## Profile (Cont.....)

Adopting a collaborative approach, Michaelston Community College (11-18 years of age) and Herbert Thompson Primary School aimed to better understand how they might utilise Dragon Multi Skills, a key resource linked to the PESS and PLPS initiatives, to help close the attainment gap between boys from more and less privileged backgrounds. This case study follows their journey using Aqua Dragons, a joint initiative with a particular focus on building self-esteem, confidence and motivation.

## The Challenge: What was the problem?

Michaelston Community College and Herbert Thompson Primary School are both situated in Ely, one of the most deprived suburbs of Cardiff. 49.1% and 51% of learners at Michaelston Community College and Herbert Thompson Primary School respectively are eligible for FSM. These figures are much higher than both the local authority and Welsh averages. Through a collaborative approach the schools wanted to adopt a multi-faceted methodology to develop the self-esteem, confidence and motivation of learners. In addition, the schools aimed to improve the literacy skills, numeracy skills and physical development of their pupils. In particular the schools targeted learners with behavioural issues, low attainment levels, lower levels of self-esteem, confidence and motivation. The overall aim was to tailor the curriculum to the needs of boys through the provision of enriching experiences that engaged disadvantaged children and young people in the learning environment.

**SUPPORTING Y3&4 WITH LITERACY AND  
NUMERACY**

**Introducing aqua dragons (click picture to play  
video)**



# Closing the Gap

## The Intervention: What did they do?

The schools predominantly used water-based activities delivered by young leaders to the children. The intervention aimed to close the gap in educational attainment and improve confidence and self-esteem. Michaelston Community College identified a group of post 16-year old boys to be trained in the delivery of Dragon Multi Skills. The training took place on dry land and in the water and was delivered by a PESS trainer. Once the boys had become competent Dragon Multi Skills leaders their role, with support from staff, was to adapt and develop land-based activities into a wide range of aqua-based activities. These activities were to be delivered to boys at Key Stage 2 from Herbert Thompson Primary School. Children from years 3 and 4 with behavioural issues and lower levels of attainment were identified in Herbert Thompson Primary School. Since the majority of the activities would take place in the pool the leaders decided to call the intervention Aqua Dragons. Stage one of Aqua Dragons was aimed at raising self-esteem, confidence and motivation, creating a trusting relationship between all learners and was delivered over a four-week period.



Stage one of the aqua dragon intervention (click picture to play video)

# Closing the Gap

## The Intervention: What did they do?

Stage two focused upon the impact Aqua Dragons had on the learning experiences of children. The aim was to improve literacy and numeracy skills through the addition of numeracy and literacy tasks to the adapted Dragon Multi Skills activities completed in stage one. This was delivered over a five-week period. The boys from Herbert Thompson Primary School were then tasked with taking ownership and responsibility for a blog and, with the support of their leaders, created their own land and water-based activities to develop numeracy and literacy skills for their group. iPads were used to record student work in the pool, as well as completing the class Dojo to track and support positive behaviours. The boys from Herbert Thompson were provided with Edmodo accounts (a social learning network), which allowed the leaders, teachers, parents, learners and others to interact and provide consistent messages even when away from the pool. Edmodo also afforded learners the opportunity to reflect on the literacy and numeracy sessions within the pool to consolidate their learning. All Aqua Dragon sessions were recorded and featured in a weekly blog that was shared with the children and young leaders, allowing all involved to track their progress and to take what they had learnt back into school. All participants were given Aqua Dragon polo shirts to solidify their identity as a working group and, at the end of every week, the leaders awarded star of the week to one of the learners.



Stage two of the aqua dragons intervention (click picture to play video)

# Closing the Gap

## Impact: What changed for the children and young people?

For the boys from Herbert Thompson Primary School the first four weeks of the intervention focused upon building confidence in the pool. Ground rules for behaviour and developing relationships based on trust, honesty, integrity, communication and a willingness to listen and learn were agreed. Observations of learner behaviour had shown improvements for all across the board. Learners and young leaders alike pushed the boundaries to try new activities and take on new challenges as they became more confident. The improvements observed in motivation, self-esteem and self-assurance can be demonstrated with the example of Harley. Harley was extremely nervous about entering the pool, he certainly did not get his face wet and was not at all keen on the idea of swimming at the beginning of the intervention. By week four, with specific one-to-one support from one of the leaders, Harley not only put his face under the water but was more confident and willing to swim. Aqua Dragons had provided Harley with the resilience and confidence to keep trying if at first he did not succeed. For his efforts and determination Harley was awarded star of the week and featured in the 'Aqua Dragons' blog.



Stage one: impact of aqua dragons (click picture to play video)

The leaders from Michaelston Community College had grown in confidence. They started to embrace and develop their leadership,

communication, organisation, delivery and reflective skills. Importantly the leaders had built a strong rapport with their learners, understanding their challenges and needs. This allowed the leaders to tailor the Aqua Dragon activities and sessions to be child-centred and support the boys at their developmental stage of learning. The boys from Michaelston Community College had developed into mentors and role models for the learners from Herbert Thompson Primary School.

*"The boys listening skills have come on really well. The leaders now have complete confidence in working with the group and encourage the boys to listen well all the time."*

(Source: Aqua Dragons Blog: A Change of Scene; <http://pessaquadrasons.wordpress.com/>)

# Closing the Gap

## Impact: What changed for the children and young people?

Stage two of the Aqua Dragons intervention supported gains observed in numeracy for the boys from Herbert Thompson Primary School. 86% of the boys from year 4 increased their attainment in numeracy in line with their individual targets, with 57% of the boys superseding their targets by at least two sub-levels. 71% of the boys from year 3 increased their attainment in numeracy in line with their individual targets, with 43% of the boys superseding their targets by at least two sub-levels. During stage two the learners were introduced to distance learning using Edmodo and the blog. Follow up sessions were organised with the intention of promoting discussions, sharing ideas and views and developing oracy skills.



Developing numeracy through adapted Dragon Multi Skills activities



# Closing the Gap

## Impact: What changed for the children and young people?

*"In our quest to enthuse the students in their learning, the boys did some reflective writing based on their experiences of last week. This work was done before they came to the pool."*

*"The boys read through last weeks post on our blog and then wrote down how they felt about the session. This is not only useful in developing their literacy skills but also to support the programme going forward to gauge their thoughts."*

*"Here are some examples of their reflections ...."*

*"We learnt how to listen."*

*"I like playing games in the pool."*

*"We get better at our handwriting in class and we are a team."*

*(Source: Aqua Dragons Blog: A Change of Scene; <http://pessaquadragons.wordpress.com/>)*

The boys from Michaelston Community College had developed a solid grounding and understanding of how Dragon Multi Skill sessions could be used across the curriculum to support literacy, numeracy and physical literacy. For example, one day the pool was unavailable so the leaders meticulously planned and organised a number of dry land activities with the aim of using Dragon Multi Skills activities as a vehicle for developing numeracy and literacy.



Stage two: impact of aqua dragons  
(click picture to play video)

# Closing the Gap

## Impact: What changed for the children and young people?

*"The game was simple, the boys had to kick the ball and run to the far end of the hall. To add in the numeracy though they first had to solve a sum. Once they were asked the sum they then kicked the ball and had to run to the correct answer (different values had been placed around the space to make the students work it out)."*

*"On return safely and with the correct answer they were awarded 2 points. In order to keep track of the score the team counted in the successful players and using their 2 times table they worked out their score."*

*"To add in some literacy we looked at developing tactics so had a team talk where the students had to discuss techniques to be more successful. They were really good at this and showed some really good confidence and good use of sports vocabulary to explain their thoughts."*

*(Source: Aqua Dragons Blog: A Change of Scene; <http://pessaquadragons.wordpress.com/>)*

During the final few weeks of the intervention the boys from Herbert Thompson Primary School, with the support of their leaders, were asked to plan activities. There was an added challenge which involved the children including numeracy and literacy elements within their activities.

*"The boys were really amazing at this and we played their activities. First of all we did 'stuck in the mud'. The literacy and numeracy element was that when you were tagged you had to either spell a word that was called out or answer a maths question."*

*"The second activity was a basketball game where they had to keep track of their score. Different points were allocated to different spots on the floor and they could make it more difficult to gain multiples of that number."*

*(Source: Aqua Dragons Blog: A Change of Scene; <http://pessaquadragons.wordpress.com/>)*

Finally the boys were asked to adapt and transfer these activities into the pool and to continue to develop new activities and ideas.

# Closing the Gap

## Impact: What changed for Michaelston Community College and Herbert Thompson Primary School?

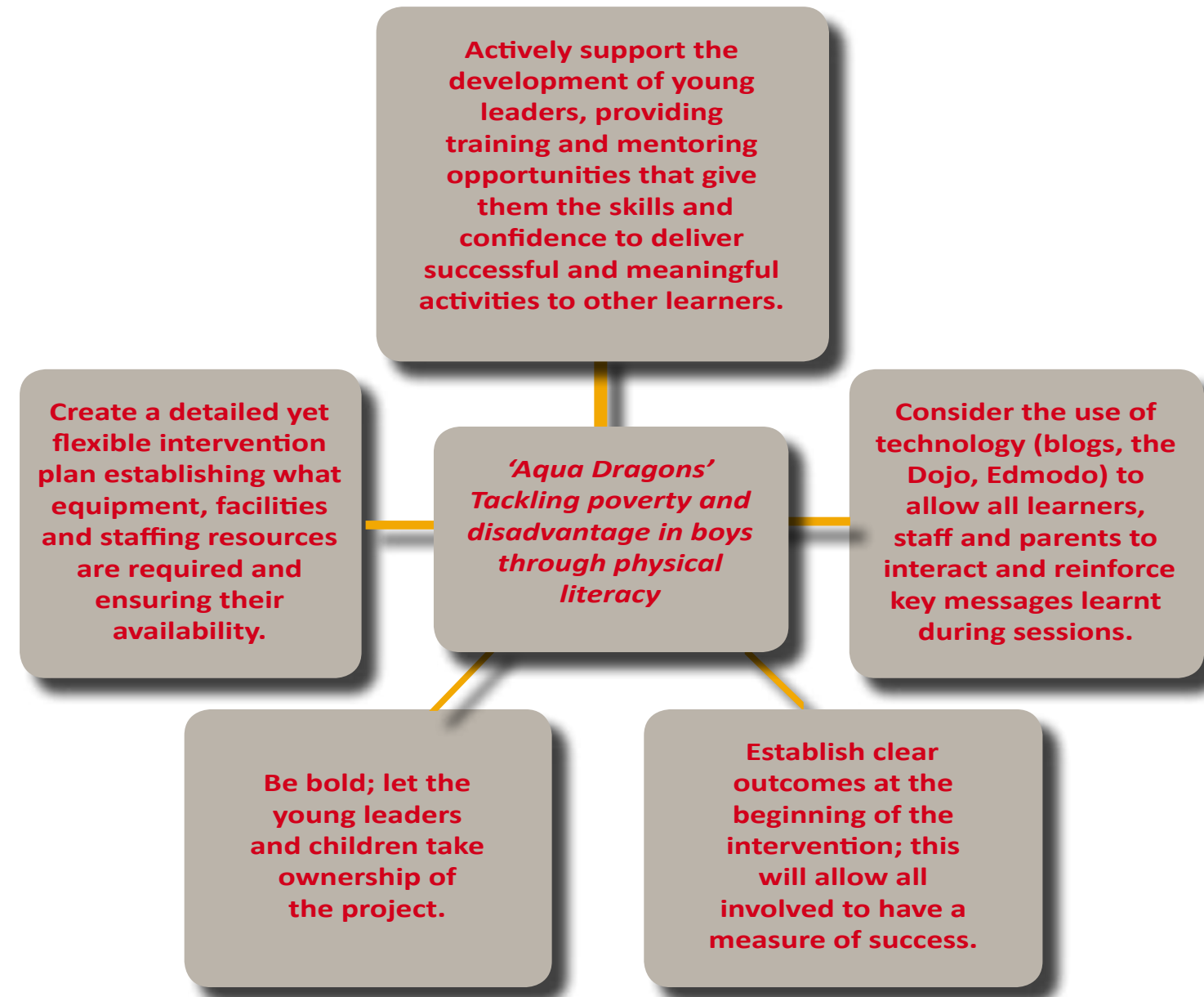


The aqua dragon journey (click picture to play video)

The collaborative approach adopted by Herbert Thompson Primary School and Michaelston Community College has created a strong partnership supporting the learners' journey from primary through to secondary education. Herbert Thompson Primary School has effectively used Dragon Multi Skills as a tool to develop learners at different stages of their physical and academic development. The approach has provided each learner with a peer support network, a sense of value, wellbeing and ownership over their learning and physical literacy journey. As a result, the school has started to address closing the attainment gap in relation to both gender and socio-economic status, increasing the motivation and availability to learn of its pupils. The schools are continuing to work together to further develop Aqua Dragons.

# Closing the Gap

## Recommendations: Advice for schools and practitioners



# Sport Wales PESS and PLPS Case Study

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