BSF Guidance:
Transforming PE and Sport
in school using ICT

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Abstract
This guidance explains how PE and Sport can deliver transformational outcomes using ICT as a tool. It provides advice on how schools and local authorities should plan their ICT provision during the BSF process and how this should be reflected in the PfS standard documents. The document also provides case study examples and further contacts for relevant organisations.

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> "*Together, ICT and PE link physical and mental activity, practice and theory…. Ultimately, the use of ICT in PE helps to create integrated, rounded individuals*".
>
> (Body and Mind: A report on the use of ICT in physical education Becta ICT research, 2005)

1.0 Purpose

The purpose of this guidance is to help local authorities and schools prepare for the challenge of integrating ICT into their PE and sports provision in a school rebuilt or refurbished under the Building Schools for the Future (BSF) programme. BSF is concerned with educational transformation and this guidance is intended to help schools and local authorities realise what transformed PE and Sport could look like as a result of thoughtful investment in ICT. The guidance also includes case studies showing examples of the use of ICT in PE and School Sport which are in use today and which give Teachers and other Educators the opportunity to engage with pupils and help them participate and learn in new ways.

2.0 Background

The BSF process should involve engaging stakeholders and partners at a local level to ensure ICT solutions meet the needs of PE and Sport both in the design of the building and the teaching and learning devices employed to enrich and enhance the curriculum and extended schools offer. The content of this guidance reflects the collaboration between Partnerships for Schools (PfS), Youth Sport Trust (YST), the Association for Physical Education (AfPE), the Amateur Rowing Association (ARA), Ability Net, the Innovation Unit and the Department for Children, Schools and Families (DCSF)

An integral component which links buildings with teaching and learning is Information Communications and Technology (ICT). BSF aims to provide:

- a step change in the level of ICT provision in secondary schools in England;
- buildings designed to maximise use of ICT;
- managed ICT services which guarantee availability; and
- incentives to develop the use of ICT in teaching and learning.

In addition, secondary schools provide a major resource for local communities, and as such, the new and refurbished sports facilities delivered by BSF are being designed for shared community use wherever appropriate. In line with the "Every Child Matters" agenda, every BSF school will be an extended school, offering additional or dual use facilities, such as sport halls, libraries, nurseries and ICT resources. BSF offers a great opportunity to integrate schools into wider regeneration projects, repositioning our schools at the heart of communities.

All of this requires learning environments in which ambitious education outcomes can be delivered, inspiring teachers to innovate and young people to engage. BSF schools – whether rebuilt or refurbished – must be designed not only for the needs of

this decade and the next, with sustainability, flexibility and adaptability in mind. In light of this, good quality, thoughtful design is key to the success of the programme.

3.0 Why is ICT so important in BSF?

Information and Communications Technology (ICT) has immense potential to change teaching and learning, encouraging individual learning programmes tailored to the needs of the student and allowing learning to take place outside of school sites and school hours. Around 10% of BSF funding is allocated to ICT, reflecting its importance. Whilst the use of ICT has been exploited in many specialist sports colleges, BSF offers all schools the opportunity to maximise the use of ICT for PE and Sport.

What is an ICT managed service?
A managed ICT service is the hardware and software that provides networked computing, allowing pupils and teachers to use learning software and manage pupil data. Specialist hardware and software will be provided as part of the ICT service. Everything to be provided through the managed service is captured in a contract with a specialist provider (usually part of the Local Education Partnership each local authority procures to deliver BSF locally). A carefully specified and procured managed ICT service will allow schools to get on with their core business and not be distracted by technical problems. A good managed service should allow ICT to be seen as a "fifth utility". The buildings, including all sports areas, should have ICT fully integrated into their structure.

Will BSF provide funding for new ICT equipment?
There will be a one-off grant to the local authority based on pupil numbers. This is intended to cover the capital costs of the ICT infrastructure and equipment, and getting everything up and running. Each school gets to choose how a percentage of their allocation is spent, through a local choice fund and the bidders will propose a mechanism for this. Aggregating purchases across a local authority will result in lower prices for equipment and better value for money e.g. a group of schools may want a common video analysis platform to support 14-19 plans. A shared learning platform and common data centre will allow pupils access to resources on school and community sites.

Funds are not intended to only provide computers and peripheral equipment, but also to develop a high-quality infrastructure which can run a range of services. This might include, for example, IP telephony, the building management system, CCTV, access control and cashless catering as well as the school's management and administration system and all its curriculum applications. This will enable pupils to access other sites and the resources on those sites safely and easily.

What is a virtual learning environment?
 A VLE is a collection of integrated software tools designed to help share, plan, deliver and search learning resources. Sometimes called a learning platform, it usually includes content, assessment and progress tracking. It is aimed at both teachers and learners. This could allow students to record their health and fitness data and share this data with parents. An e-portfolio will capture a pupil's achievements and enable them to share this anywhere they have internet connection.

4.0 How can I include PE and Sport within BSF ICT processes?

The three key elements to the process of developing school and local authority ideas are the Strategy for Change, Outline Business Case and Final Business Case.

Strategy for Change
The Strategy for Change (SfC) is the first key BSF document the local authority has to produce and agree locally. It ensures that the local authority's educational priorities are at the forefront of their BSF planning processes, enabling more forward-looking learning environments to be developed.

School staff, governors and the local community will need to be engaged with the local authority's development of its strategic objectives and plans for its Strategy for Change. The local authority's SfC submission should reflect the vision for transforming learning across all subject disciplines, supporting numerous other national agendas including community cohesion and regeneration.

Local authorities may identify PE and Sport as an effective support mechanism to deliver many of these outcomes expected from national strategies: indeed the PESSCL strategy (now PESSYP) is a good example of a DCSF initiative which delivers a wide range of outcomes ensuring more effective collaboration with key stakeholders.

Embedded within the development of high-quality PE and Sport should be the aspiration and commitment to ensure ICT is the key strand running through all aspects of curriculum development in this area. Local authorities should be seeking to demonstrate effective ways of promoting the use of ICT in PE and Sport throughout the SfC documentation in such a way that it becomes fundamental to the process and is not an after-thought.

ICT can support the role of PE and Sport in delivering against national policy areas which are often addressed in the Strategy for Change such as:

- Obesity – by linking heath, physical activity, diet and performance in PE & Sport to a data capture service.
- Community offer and extended schools – by providing user-friendly systems to book community sport sessions and sports club activity electronically and access zoned areas.
- PESSCL / PESSYP – by sharing data and membership information across School Sports Partnerships and local authority areas
- Gifted and Talented pathways – using ICT to analyse and assess performance and provide virtual links to clubs and coaches

Outline Business Case
The Outline Business Case (OBC) is a detailed assessment of what is achievable and affordable in BSF. It provides sufficient detail to secure formal approval to begin the procurement of a private sector partner.

The OBC aims to ensure that projects are sufficiently robust to move into procurement, and in particular that they are:

- affordable;
- offer value for money;
- will be attractive to the market; and
- have the necessary local authority resources and experience in place.

Final Business Case

During OBC and through to Final Business Case, the local authority and schools will be expected to develop output specifications for their school estate and ICT (Appendix 12 of the OBC document) which should reflect their aspirations for PE and Sport.

Within the ICT Output Specification the opportunity exists to include school enhancements. A 'good' output specification would be categorised by each school incorporating the ICT requirements which arise as a result of their school specialism.

> *For example, a specialist sports college could specify their requirement for data on pupil performance in PE and Sport to be recorded automatically. This might include an individual pupil's activity and performance such as the distance covered and time taken in a session on a rowing machine be captured and recorded into the pupils' profile on the school's learning platform This service could be expanded to offer all parents and other local residents a user account on the learning platform which would give them a "health profile" page. This would fit well with a new BSF school which intends to encourage the wider community to use a school's sports facilities.*

A local authority might take the approach that all schools within a BSF programme regardless of specialism could promote the objectives of the Every Child Matters agenda, such as being healthy and staying safe, by showing routes to school by foot or cycle path, personalised for each child, based on their home postcode and displayed on their home page on the learning platform.

As part of the infrastructure development, it is important to consider training and development for staff to ensure that they are confident in using ICT solutions to assist them in their teaching, administration and management tasks. This may also include developing proposals for a local choice fund for BSF schools within an area which give the PE department within a school equal priority in terms of equipment, peripherals and software from an agreed catalogue.

5.0 What can local authorities do?

Stakeholder engagement is critical in developing an appropriate ICT Output Specification. Local authorities are advised to involve as wide a range of stakeholders as possible.

In order to define current provision and future needs the following questions may be a useful starting point:

1. How many teachers have a school-owned laptop (including Laptops for Teachers)?
2. Have the PE staff used the Self-Review Framework?
3. What percentage of eLearning Credits have been spent on PE and Sport as a subject area?
4. Can the PE department upload data e.g. forthcoming sports fixtures to the school website / learning platform?
5. What CPD opportunities exist currently and are planned in the future to support schools staff in the use of ICT in PE and Sport
6. Has the PE department access to whiteboards, mobile devices, sensors, video analysis?
7. How are new school staff inducted into the use of ICT in PE?

The local authority should consider what change management is required for all PE and Sport staff to ensure effective use of new technologies to support teaching and learning.

The National Strategy for PE and School Sport should be considered as a support mechanism to facilitate effective CPD provision for new and existing school staff. All school staff involved in the delivery of PE and Sport should be proficient in the use of the relevant ICT equipment and software, and have an understanding of the wider benefits associated with the use of ICT

6.0 What can schools do?

"ICT brings together the academic and the physical in a way that wasn't possible before. You have studious children who don't like PE because they think of it as running around a muddy field and being part of sweaty teams. A fitness room equipped with ICT introduces another dimension to the subject. Then it's not just physical exertion. It's also mathematical data displayed on a whiteboard. You can video a long jump and overlay two film sequences to compare the arc and timing of each jump. At the same time, for those who prefer mud and sweat, ICT makes the science of sport come to life."

Anne Barton, Head of Eltham Green Specialist Sports College
Quote from Body and Mind: A report on the use of ICT in physical education. Becta ICT research, 2005

The school should consider the following in their School Strategy for Change
- The role of ICT in supporting the School Vision for PE and wider Community Sport
- Opportunities for integrating technology choices to deliver cross-curricular benefit e.g. visualisation software packages can be used by other subject areas such as drama, mathematics and science.
- Use of ICT for measuring, analysing and comparing performance data - For example, the data from fitness monitors could be integrated into a school's learning platform to give pupils the opportunity to view improvements in their fitness levels
- The creative opportunities for using technology to record, review, publish, collaborate and perform with local, national and global audiences
- Using ICT to measure against delivery targets such as monitoring levels of sport, and physical activity outside schools hours, to support the PSA target of five hours by 2010.
- Using ICT to reach disengaged pupils – for example dance mats may offer an alternative to traditional competitive team games, and may be more attractive to hard-to-reach pupils or members of the community.

7.0 Conclusion

ICT and PE are central elements of the BSF programme and key factors in meeting the needs of the ECM, 14-19, Personalised Learning, Inclusion and the Children's Plan.

PfS Education ICT Advisers and PE and Sport Advisers will be working closely with local authorities to ensure that they develop a forward-thinking sports strategy which is embedded in their BSF process.

From Strategy for Change through to procurement, local authorities and schools are advised to explore the opportunities that PE and ICT can offer and reflect this in their ICT output specifications.

BSF ICT funding will enable ALL schools to fully explore how ICT can be used to enhance and enrich pupils' experience of PE and Sport both in and beyond the classroom.

8.0 Where can I find more information?

Standard documentation for ICT including a Service Output Specification and Guidance, a Standard Contract Template and a Payment Mechanism are available from the Partnerships for Schools' website (www.partnershipsforschools.org.uk).

The British Educational Communications Technology Agency (Becta) is the lead body for ICT in education. It is closely involved with the BSF programme and the website contains information on the use of ICT in schools (www.becta.org.uk).

The following organisations can help you develop your ideas further by offering relevant information and examples as well as practical support:

www.afPE.org.uk

www.youthsporttrust.org.uk

www.abilitynet.co.uk

www.sportengland.org

www.becta.org.uk

Annex 1: Case Studies

1. Designing for Learning
2. Innovation in action
3. PE ICT supporting the curriculum
4. PE and ICT to support Inclusion
5. PE ICT Assessment for Learning
6. PE ICT Teaching and Learning

Case study 1. Designing for Learning

Making Digital Feedback in Physical Education Easy.
Steve Kibble, Adviser for Physical Education
Devon County Council

For too many years, providing digital feedback to learners within the PE environment has been dogged by logistical problems. For many teachers, gathering the appropriate hardware together, being faced with the burden of setting everything up and then having to pack things away, has often prevented embedded ICT practice from developing.

There are now a new generation of teachers in physical education who are committed to the benefits of digital images as a means of setting expectations and helping young people to see for themselves the progress they are making. These teachers require hardware configurations which reduce set up time and avoid the need for trailing cables. In reality, this can only be achieved through appropriately installed projectors and screens with easy connectivity for teachers' laptops etc.

At Uffculme School in Devon, the Physical Education facility has four permanent positioned presentation units available for teachers to use. The school has an Aesthetic Movement Space (AMS), a five-court sports hall, a Physique Centre, a large circulation space and four changing rooms (two indoor and two outdoor).

At the design stage the use of digital images to support learning was a key requirement and both outdoor changing rooms were designed to enable young people to be effectively briefed before leaving the changing area. Each area has a 32inch LCD screen installed, close to the ceiling, providing access to both internet-based footage and material from the teachers' own laptops. It was critical that network access was made available in every area including the outdoor changing rooms.

For indoor work, changing areas are smaller and youngsters are briefed in the teaching spaces. The AMS has a 42inch LCD with full sound system, whilst the sports hall has a 4500 lumen projector mounted in the adjacent room, using a long throw lens to project onto a motorised screen which can easily be retracted when not needed. The placement of a projector out of the sports hall environment, projecting through a hole in the wall ensures that the expensive equipment is not exposed to balls at the risk of being knocked out of alignment. Most importantly, the termination for accessing the unit are wall-mounted in the sports hall alongside an appropriate mains supply, reducing the need for trailing wires to laptops or DVD players.

The most important consideration when making decisions about the type of digital presentation units is to ensure that a class of young people can be stopped quickly within a lesson, shown a particular image or video and move quickly back into their practical work. The use of such equipment should enable such viewing to enhance

the lesson without reducing the pace of learning.

In the case of Uffculme PE department, staff organise their video using Dartfish software making clip selection and the use of added value video content easy to achieve and manage. Dartfish applications also allow immediate feedback to be facilitated with minimum effort using a remote control which removes the need to go to the laptop during the lesson.

Finally, it is worth noting that in the Uffculme PE department, the six computer terminals are installed in the circulation space outside the AMS and the Sports Hall to enable students to analyse movement and compare their own performances with reference footage.

Through the application of these ICT assets, the staff at Uffculme have embedded technologies into their everyday teaching, creating a vibrant and highly effective learning environment. The progress students make is significantly enhanced as a result. As one teacher said, "we are able to turbo-charge learning in PE because of our facilities"

Case study 2. Innovation in action

Hundreds of Kent pupils to walk to Beijing and back - without even leaving the county!

Inspired by having the London 2012 Olympics on its doorstep, Kent County Council, has set a benchmark for creating innovative campaigns that are designed to encourage active lifestyles amongst its pupils. 'Steps to Beijing' was launched during Sport Relief 2008 and saw hundreds of Kent pupils over 16 weeks walk the 10,140 miles that it would take to walk from Kent to Beijing and back to collect the Olympic torch – all without leaving the country!

'Steps to Beijing' was launched by the Kent County Sports College Network (which has a high concentration of Specialist Sports Colleges), to increase awareness of the 2008 Olympics in Beijing amongst pupils in the Kent area and to encourage more children to get active. Every week, four members of the school community at each of the 14 Sports Colleges within the Kent County Sports College Network wore a device called an ActiPed that recorded the number of steps the wearer did each day. The number of combined steps that the children achieved each week counted towards the target.

ActiPed is being used to great effect by some Kent schools as part of a trial to encourage children and adults of any fitness level to lead a more active lifestyle. The ActiPed is a 'next generation' pedometer that simply clips onto your shoe. Its patented wireless technology can tell what type of activity the wearer is doing and automatically tracks and records all activity that the wearer does. As well as being able to distinguish between different types of activity, the ActiPed measures total active minutes, distance travelled, number of calories burnt and total number of steps taken. The captured data is uploaded to a website where the user can see their individual and group progress and see that every activity counts.

The County Directors of Sport and organisers of 'Steps to Beijing' hope that the initiative will show how easy it can be to change negative attitudes towards exercise by promoting the benefits of being more active in our everyday lives. They believe that ActiPed is the perfect solution for showing this because anyone can use it, whatever their fitness level, and it is great fun to use. Danny Donovan, Kent County Council's Strategic Officer for School Sport and Physical Education is backing the project as part of the County's 'Every Child Active' strategy: "O*ur 'Every Child Active' campaign aims to motivate and inspire every school in Kent to ensure all our young people experience the enjoyment and excitement of participating in sport and to help them recognise the benefits of taking part in regular physical activity throughout their lives."*

This is not the first time that the Kent Schools Sports Partnership has worked with ActiPed. 'Catch Kent if you Can' saw a Directors of Specialism (or a senior leader), one pupil, a middle leader and a governor from each of the Kent Schools compete against each other to see who did the most combined number of steps in a given period. Chris Brown, Director of International Business Development for ActiPed commented, *"We wanted to demonstrate that no matter what your age or fitness level anyone can benefit from wearing an ActiPed. The challenge really brought out the competitive nature of our participants, but most importantly everyone involved with the project had a lot of fun and told us that because they new that every step counts they changed their normal routine to become more active."*

FitLinxx, the owners of the ActiPed technology monitored the 'Steps to Beijing' project and kept everyone up to date with the Kent pupils' progress.

Case study 3. PE ICT supporting the curriculum

Rowing and ICT – An Oarsome Partnership

Balby Carr Specialist Sports College – Doncaster
"We began using indoor rowing in 1999 as part of an Amateur Rowing Association (ARA) initiative called Project Oarsome. Today we have integrated rowing into our curriculum and have converted a disused changing area beside the gym into a high-tech ICT rowing classroom. We have linked the machines to a laptop and data projector. The pupils really enjoy what they do and most importantly they learn at the same time. It also provides our Maths and Science departments with real data which stimulates and promotes student progress in both these core subjects.

"Working with the Primary Care Trust and local club, all pupils in Year 7 take part in a health module using the computerised feedback from the indoor rower to measure progress. Our Year 9s organise competitions using E-Row and Year 11 Junior Leaders now take the equipment out into the community as part of a work place health scheme. What we have done can be replicated in any secondary school."

What is indoor rowing?
Indoor rowing machines were first invented over 100 years ago; in fact there was even one on the Titanic. Today schools that are miles apart or even continents can link rowing machines to the internet and learn, train or race pupils across the UK or even the world!

Indoor rowing machines are designed to simulate rowing on the water with resistance provided electro-magnetically by water, or air. Machines range from a few hundred pounds to over £1000.

The first nationally co-ordinated use of the indoor rowing in schools was by the ARA in 1997. In 2007 over 1000 schools across England offered indoor or water-based rowing.

The use of rowing machines has now expanded into a wide range of curriculum and whole school areas including ICT, Sport Science, Maths, PSHE and the National Healthy Schools Programme. ARA lesson plans can also provide opportunities for extension and differentiation.

There is good evidence that indoor rowing attracts pupils who are disinterested in traditional forms of Physical Education. One of the reasons for this is the computer monitor built into the major brands of equipment; pupils receive instant feedback in a variety of ways.

ICT and indoor rowing
Indoor rowing can be used as a very effective tool to develop pupils' ICT skills, and can promote collaboration between ICT and PE departments. Pupils can use the machine on their own or work as teams as part of a formal skill assessment or competition.

Analysis using speed / pace
On the most common three brands of rowing machine how fast you are going is electronically displayed as 'time per 500m'. This type of display is related historically to water-based rowing where boats compete over courses split into 500m segments. At the touch of a button participants can set the machine to illustrate average pace or the speed for each complete rowing stroke they take.

This function allows participants to set individual performance goals. The speed at which they go is constantly updated in relation to a number of factors including; Technical Skill (Bio-mechanics), Actual Effort (i.e. Heart Rate), and the number of strokes taken per minute (known as stroke rate).

In order to motivate pupils, realistic standards have been set for each year group in secondary education. These are calculated as a percentage of the 'world best time' and allow pupils and staff to help track long-term skill and fitness progress.

Analysis using calories, watts and heart rate
Some brands of rowing machine can also convert speed into calories burned. This is useful in helping explain the amount of energy in different foods. Conversions can also be made into watts. Using associated software many schools now encourage learners to prepare graphs and charts illustrating the relationship between heart rate, speed and calories burned.

Competition
As part of a 'Go-Race Indoors' competition rowing machines can be linked together (some wirelessly) with a lap top and data projector. Pupils can then race each other with a series of boats displaying their relative position. Organising a competition as a practical task is a useful assessment of team work requiring knowledge of hardware, software and communication skills.

Extended Learning
Once pupils have mastered the basics they can take part in the Junior Rowing Leaders course which demonstrates their ability to organise a competition using ICT. United Kingdom Coaching Certificate courses are available for both pupils and teachers.

A range of websites offer information on indoor rowing. Pupils should be able to access training guidelines, record their own scores and learn about health-related exercise. Those interested in performance can also compare their age related scores at a local, national and even international level.

For further information check out www.ara-rowing.org
The Amateur Rowing Association (ARA) is the national governing body for rowing. Rowing can be regarded as both a sport and physical activity. The ARA is very keen to support local authorities and their secondary schools that wish to develop rowing. The ARA only recommends rowing for secondary age pupils.

There are three key ways that schools can help develop rowing through BSF:

1. **Curricular use:** Schools could develop an ARA-recognised indoor rowing curriculum and deliver multi-activity PE health and fitness sessions or cross-curricular activity. It is vital that staff undertake the ARA PESSCL Indoor Rowing for Schools CPD module.
2. **Extra-curricular use:** Schools can make direct partnership links to community rowing clubs and encourage those clubs to run sessions with pupils in the form of an after school ARA-accredited PESSCL indoor rowing club. This could lead to water-based activity.
3. **Community use:** Schools could make their facilities available to community rowing clubs, for example a fitness suite, swimming pool or gym (for aerobic activities).

Case study 4. PE and ICT to support Inclusion

ICT can promote access to the PE curriculum for pupils with a range of Special Educational Needs. Sport has played an important part in the growing awareness of the public that people with disabilities can achieve remarkable results in this area. Searching online for both Paralympics and special Olympics will produce a wealth of material about elite athletes with a disability and the training regime and skills they have developed.

Recording and Monitoring
Technology can allow pupils with a range of needs to gather data about their bodies' performance and progress which they can then use to plan the next steps of any regime they wish to follow. The use of mainstream devices such as heart rate monitors, fat monitors, pedometers and talking scales can allow those who find it difficult to monitor themselves through language, sensory or physical impairments to take an active part.

The data gathered from such technologies can be entered into data logs and databases to track progress towards stated aims, simple data logging can also be used to monitor performance in sports requiring accuracy as well as physical effort.

In planning performance programmes and diet for students with a disability, advice should be sought from a dietician or physiotherapist where appropriate. The normal calorie intake for pupils with cerebral palsy for instance, may be quite different from those of other classmates.

Technology and Access
Technology is increasingly offering opportunities to pursue physical activity where it had previously been difficult. Below are a range of examples:

- Susan is aged 13 and has Down's syndrome. Discussion with her teacher has suggested that she needs to try to take better care of her weight and she has begun to record her diet using symbols. She has little interest in sport, so her teacher has introduced her to a dance mat on a gaming console where she can follow a series of directions to move her feet with increasing speed. Her length of time spent exercising this way is gradually increasing by adding another song to her programme each half-term.
- Andrew is aged 14 and is a wheelchair user. As a result he finds it difficult to join sporting activities held outside of school time and access to a gym or sports centre is dependent on the availability of his parents to take him there. He enjoys using a computer console at home and has begun to use a series of software solutions to maximise his physical fitness. These include webcam games on the PC that require him to make large arm movements, head movements and to stretch and reach to activate areas of the screen. He has extended this by the use of a Nintendo Wii which allows him to play simulated tennis, a game which he has seen a number of disabled athletes playing.
- Melanie is 15 with an eating disorder and self image issues. She has begun a programme to change her diet but is unwilling to join a class for exercise as she is extremely anxious about being seen in 'sportswear'. Whilst she addresses these emotional issues, she has begun an aerobics programme using the eyetoy kinaesthetic where she can increase her physical activity to stimulate appetite in the security of her home.

All of the above are examples of how technology allows access to physical activity and can increase the range of ways in which PE is delivered for pupils with a range of needs.

Case study 5. PE ICT Assessment for Learning

High Ridge School

It has been difficult to assess students at Key Stage 3 in a consistent and accurate way across the range of activities offered by schools. With a large and diverse curriculum it is essential to have a reliable system of collecting, displaying and updating data evidencing the subsequent levels given. High Ridge School wanted to use the package to impact on the whole school and the two Sports Partnerships that they are associated with. The department created a spreadsheet which contained all students within Key Stage 3 and all of the activities that they would complete, over the three-year period.

Instead of using Levels 4b, 5a, 6c, etc, numbers were used instead, so that, for example a Level 3c would be between 30-33, a level 4b would be between 44-46, a level 5a would be between 57-59 etc.

The spreadsheet was weighted so that the top three grades of each students completed activities had an impact on their overall level grade. These related directly to Activity Specific Level Descriptors. Using these descriptors, students are able to see where they are currently working and what they need to do to improve.

Integrated alongside these are the Core Tasks written by QCA. These were produced in a student-friendly work card that contains relevant level information across development, intermediate and advanced tasks. The PE department realised that they had far too many new documents that needed presenting in a user-friendly context, therefore, after consulting with the network manager, they built a web page that was added to the school website, www.highridgeschool.co.uk and could then be viewed separately at www.highridgeschool.co.uk/PE/

This whole package was presented to the school at a twilight session in order to share good practice. Soon afterwards the Science Department created their own tracker program as did the Technology Department .Using the PE spreadsheet as a model, the Science Department produced a student tracker using prior attainment. Currently the English and Maths departments are working on how they can link in and develop their own tracking programme.

Key Stage 2 and local authority predictions for Key Stage 3 are used as benchmark data. The tracker assumes a linear progression over the three-year period. "Testbase" software was used to produce assessment material for each Unit of Work in the QCA Programme of Study. The software provides accurate NC levels. Students were assessed on a six-weekly cycle. The results were entered on a database that was then used to inform the tracker. The Department used the same scoring system as PE, for the sake of consistency. In conjunction with the database and tracker, the Department produced "assessment ladders" as part of an EiC collaborative project. These were basically level descriptors, written in student-friendly terms, for each Unit. By reference to these "ladders" students were able to see the requirements for each NC level. Knowing their current level, students were able to see the requirement for making progress to the next level.

Level Descriptors were enlarged, laminated and displayed in all eight changing rooms and reception areas within PE. Students immediately understood where they needed to make improvements. The tracker itself was downloaded and displayed every half term, when the activities being studied finished and another started. Students could see progress made and where they were within their own group. Level Descriptors and Core Tasks enable students to accurately improve the quality of their own performance whilst also adding a detailed and concise element of peer

and self assessment to the lessons.

The impact it made on whole school and particularly Science (the Sport College's secondary subject) was similar in that their tracker spreadsheets were also displayed whole school. The High Ridge students became used to seeing their progress mapped explicitly across a range of departments, as it made them consciously aware of their progress. Ofsted commented on this in October 2006 and identified that students had a clear understanding of progress made and where improvements could take place. The School Council, run by students, regularly refer to the various tracker packages used in school. Although initially they were wary of their grades being displayed around school, now, they appreciate that it highlights more and more where all students are and how achievement can be celebrated.

The whole website was shown at the HOD PE forum in North Lincolnshire where all 14 secondary schools were given their own username and password in order to use it. Even though this was only done in May 2007, already five secondary schools are exclusively using the assessment package. Two schools who piloted it initially also brought improvements to the table which were added accordingly.

It is the intention of the school to use AfL strategies appropriate to curricular target setting to raise attainment, in all curriculum subjects, through increased awareness and understanding of students own current working level and the setting of appropriate progress targets.

Tracker grades and assessment are to be fully integrated into learning strategies employed by teachers.

Case study 6. PE ICT Teaching and Learning

Improving Teaching and Learning using ICT.
St Paul's Catholic College, Specialist Sports College

Outline of Project:
Since achieving specialist sports college status, considerable time and money has been put into improving teaching and learning using ICT in both PE and Geography (second targeted subject).

Both departments have developed successful VLEs, better use of interactive whiteboards, increased kinaesthetic activities and some e-assessment. These developments have led to improved teaching and learning within both departments.

Additional time given to the Geography subject leader enabled him to have a day a week of non-contact time to develop this area. Developments have been so successful that Geography has become a lead department in this area, leading a number of INSET opportunities across the college.

The college now has an e-learning team which is led by one of the assistant head teachers to continue to develop the use of ICT at St Paul's.

Details of the Project within PE:
The PE department have produced VLE model courses for KS3 fitness testing; GCSE PE; A Level PE; and BTEC Sport which has led to:
- Increased student motivation – students enjoy the whiteboard activities, movie makers, self-marking quizzes and other interactive activities that are used in lessons.
- Increased access to materials – all lesson information is stored on the VLE so that students can access it whenever they want (students can access materials even if they have been absent from school). Additional information including coursework requirements, extension sheets, grade sheets, and assessment criteria have been made available to the students
- Better uses of AfL – 'I can' sheets (using traffic lighting) have been produced for theory aspects of the course. Forums are used enabling students to answer questions and submit them online; others in the group will then mark/comment their peers assessed work online.
- Improved monitoring of progress – Students target grades and progress marks are recorded on a tracking sheet that students, staff and parents have continual access to.
- Improved revision materials – specific revision courses have been developed that enable students to access course content, exam questions and answers, checklist sheets and additional extension materials.

Whole School Impact
Both PE and Geography results have improved significantly in a number of areas. Sports college output targets that were set for the first year were exceeded in both PE and Geography:
2006/7 Results:

PE results:	Geography results:
GCSE – 96% A*-C, 100% A-E	GCSE – 78% A*-C, 98% A-E
A2 – 67% A-C, 100% A-E	A2 – 71% A-B, 100% A-E

GCSE Whole School Results were the best ever achieved:
GCSE – 89% A*-C (including English and Maths)
A2 – 44% A/B, 99% A-E

Every Child Matters

Students enjoy using ICT, motivation levels and progress has increased, leading to higher achievement.

Annex 2: Glossary

ARA Amateur Rowing Association

BSF Building Schools for the Future

CPA Comprehensive Performance Assessment

CPD Continuing Professional Development

DCSF Department for Children, Schools and Families

ECM Every Child Matters

FBC Final Business Case

ICT Information Communications Technology

LEP Local Education Partnership

OBC Outline Business Case

PCT Primary Care Trust

PE Physical Education

PESSCL Physical Education and School Sport Club Links

PESSYP Physical Education and Sports Strategy for Young People

SE Sport England

SfC Strategy for Change

VLE Virtual Learning Environment

YST Youth Sport Trust

Further terms and definitions can be found in the *A-Z of BSF* on the Partnerships for Schools' website, www.partnershipsforschools.org.uk

Annex 3: Acknowledgements

AfPE
Association for Physical Education
Building 25
London Road
Reading
RG1 5AQTel: 0118 378 6240
Fax: 0118 378 6242
Email: enquiries@afpe.org.uk

ARA
Amateur Rowing Association,
6 Lower Mall,
Hammersmith,
London, W6 9DJ
National Office Telephone: 0208 237 6700
Fax: 0208 237 6749
General Enquires:info@ara-rowing.org

Ability Net
Freephone 0800 269545 (if you call from home)
or 01926 312847 (if you call from work, minicom accessible)
Fax: 01926 407425 Email: enquiries@abilitynet.org.uk

The Innovation unit
The Innovation Unit
28-30 Grosvenor Gardens
London SW1W 0TT
Tel: 020 7259 1232

DCSF
Department for Children, Schools and Families
Sanctuary Buildings
Great Smith Street
London
SW1P 3BT
Email: info@dcsf.gsi.gov.uk   Telephone: 0870 000 2288
Textphone/Minicom: 01928 794274 Fax: 01928 794248

Youth Sport Trust
Youth Sport Trust
Sir John Beckwith Centre for Sport
Loughborough University
Loughborough
Leicestershire
LE11 3TU
T: 01509 226600
F: 01509 210851
E: info@youthsporttrust.org